DOORWAYS TO INFINITY by George F. Forbes

FUTURE SCIENCE FICTION

DEC. 1959

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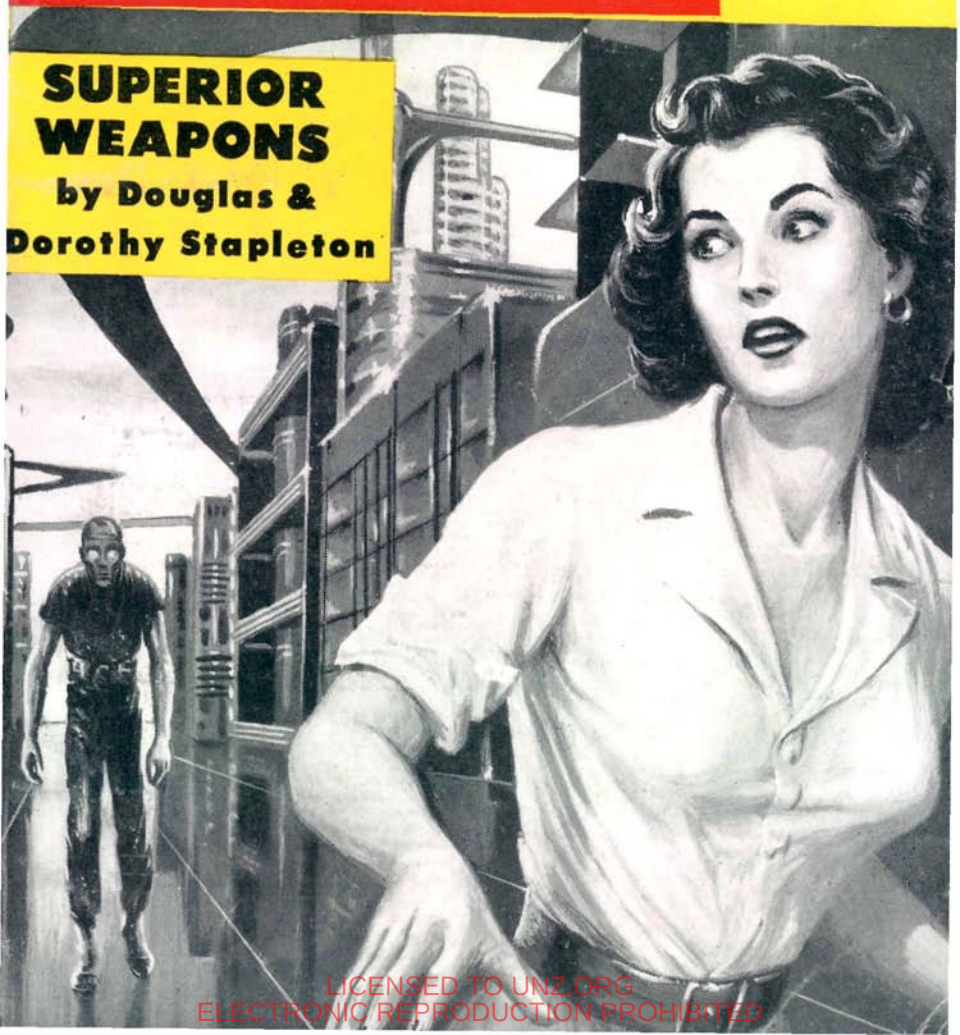
SUPERIOR WEAPONS

by Douglas & Dorothy Stapleton



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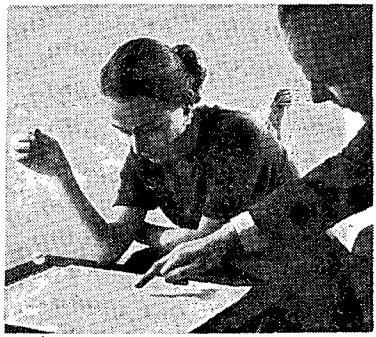

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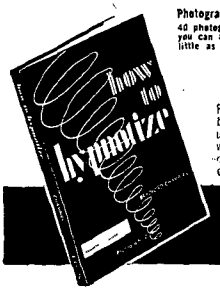

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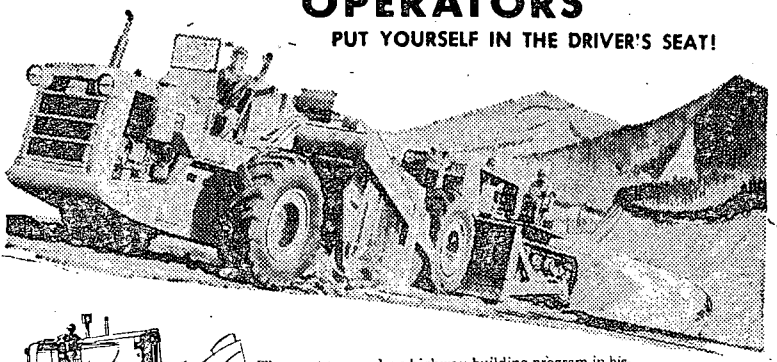

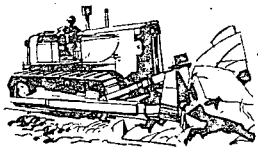

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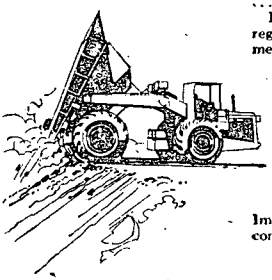

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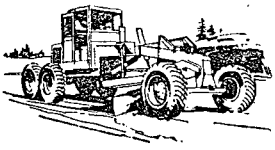

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FUTURE SCIENCE FICTION

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NOVELLA

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Jerry Wells found the "gimmick" and started to study it. And his experiments with this object, the size and shape of a half-dollar, set off a chain of events that rocked the world, and inaugurated a new age . . .

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Editor: ROBERT A. W. LOWNDES DOROTHY B. SEADOR, Asso. Ed.

FUTURE SCIENCE FICTION, Number 46, December, 1959. Published every other month by COLUMBIA PUBLICATIONS, INC., 1 Appleton Street, Holyoke, Mass. Editorial and executive offices at 241 Church Street, New York 13, New York. Second-class mail privileges authorized at Holyoke, Mass. Single copies 35c; yearly subscription $2.10. Printed in U. S. A.

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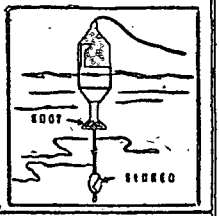

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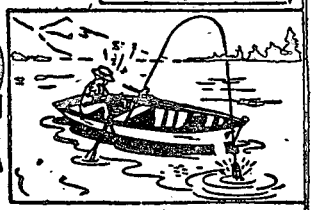

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Fiscal Year

by Al Sevcik

illustrated by EMSH

The great shakeup started when perfect counterfeit money began to drift down from the sky, like autumn leaves falling ...

EVEN BEFORE the general's countenance had completely faded from the telescreen, Van Dahl, President of Palani, was out of bed and fumbling with his clothes. Ten minutes later, he was out of the Presidential apartment and running across a small park to the planet's r a m b l i n g, two-story capitol building where he had his office.

The soft, new grass of spring was resilient under his feet, and even in his hurry he had

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The shower of money was greeted jubilantly...

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time to appreciate the heavy fragrance of the still-open night-blooming flowers. A short gust of wind lifted a handful of fluttery objects and flung them across his path. Van ducked instinctively. "Damn leaves!"

He stopped. Leaves? In the spring?

Scattered across the park were hundreds of Palanian bills, currency of every denomination. Two five-credit notes blew across the grass at his feet; a small pile of ones was caught in some shrubs along the path; and further on some tens and a twenty were lying nonchalantly in the morning sun. Something brushed his shoulder. He looked up—and clutched back against a tree for support. In spite of the general's call earlier that morning, the shock was an almost physical thing.

Drifting lazily down from the blue, like confetti from a heavenly parade, came thousands upon thousands of bills—each, Van knew without looking, a perfect counterfeit. "I see it," he mumbled to himself, "but I don't believe it." Head down, he turned and ran into the capitol.

THE TELESCREEN was buzzing when he entered his office. One hand flicked it on, while the other picked up a pile of reports that had arrived on his desk during the night.

"Van!" The voice of Palani's tall, lanky, brilliant finance minister boomed from the set.

Van whirled. "I know, Merrill; we're in real trouble."

Without answer, Merrill hefted a swollen gunnysack into view, swung it in front of the camera, and dumped out a perfectly fantastic pile of money. He sighed. "We worked all night long to get the new bills printed, and did all right, too. There's five million ready for distribution; more coming off the presses all the time." His voice grew a ragged edge. "But it doesn't matter now." Raising his hands, he let the bills dribble through his fingers. "Billions! All over the planet. Perfect counterfeits."

Van nodded impatiently. "I know. Look, Merrill, come right on over here for a conference. We have got to get action started damn quick or the economy is going to collapse like an umbrella." He

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started to cut off, then paused. "Oh—first, close down every bank on the planet. Suspend all commercial transactions."

"I have already given the order."

"Good." Van cut off the set, then punched a red button. A middle-aged, uniformed figure appeared on the screen and saluted smartly.

"Yes sir?"

Van went right to the point. "General, earlier this morning you informed me that the imitation currency is arriving from outer space in very small, very fast rockets that explode on contact with our atmosphere."

"Yes sir," the general acknowledged. "Scatters money all over the place, effective as hell."

THINKING of his own personal demonstration just moments before, Van nodded emphatically. "Yes, it is. But I assume that the space fleet is taking action to destroy any more rockets before they reach us."

"Well, sir," the general frowned, "actually, there's not much that we can do. There are thousands of these things, so small and fast that our missile tracking radar is almost useless, and we have so few adequately equipped space cruisers..." he hesitated. "Without intending any offense, sir, if you hadn't cut our last budget request..."

"That will do, General." Van bristled. "You will, of course, do the best you can with the equipment you have."

"Yes, sir."

"One more thing. Am I correct in thinking that your computers have already extrapolated the trajectories of these rockets back to their home world, and that you are now preparing counter-action?"

The face on the screen suddenly looked very uncomfortable. "I wish we could, sir, but they're coming in from every conceivable direction, and changing course erratically. The computers can't handle it. The things could have originated anywhere."

Turning abruptly, Van strode across the room and stared out of the window for a few seconds, contemplating the blue sky, the sun, and the money lying haphazardly on the capitol

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lawn. Then, slowly, he walked back to face the telescreen and the general. "Are you telling me that you don't know who our enemy is? That even though we are obviously being attacked by a power with the intent and means to completely wreck our economy, we can't fight back because Palani's military leaders don't even know who's attacking us?" He stared incredulously.

"GENERAL, do you appreciate that by swamping us with perfect counterfeits that they have made Palanian money worthless? Because everyone has all he can possibly carry, it's not even worth lifting off the ground." His voice rose in pitch. "Savings, life insurance, government bonds, not worth the paper... Dammit! Get your missile experts together and *do* something!" Van slammed his fist across the cut-off switch.

He clenched his fists tight for a moment, then pressed the red button on again. His voice was tight, but under control. "General, I apologize; I realize you are doing the very best you can."

The general relaxed slightly. "That's all right, sir." He hesitated. "Uh, sir, it's a small thing but some of the officers have been wondering about their pay, seeing as how money isn't worth so much now."

Something cold moved in Van's stomach. "I'll look into it, General."

"Thank you, sir."

As the screen blanked, the door banged open and Merrill stormed in, panting hard. "Had to walk. Drivers are on strike; say they want something instead of money for pay." He looked directly at the President. "Look, Van, this thing is getting out of hand. There are other strikes, too, and a couple of riots."

Hands clenched behind his back, the finance minister paced the room. "We've simply got to get the people calmed down, so I've arranged for you to give a tv talk in half an hour." He turned to the President. "You know, Van, this money from the sky business seems silly as hell, but I'm really getting worried.

It wasn't any joke, Van thought, even under normal conditions, leading a young so-

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ciety through industrialization's economic jungles. But now, with this crazy invasion of perfect counterfeits from space, the situation could rapidly become hopeless, and a hundred and fifty years of progress would literally vanish overnight. He pushed these thoughts to one side, and began to compose his speech.

IT WAS A good speech. Van couldn't help being proud as he delivered it, standing squarely before the video cameras, trying his best to seem a wise, forceful leader instead of simply a man, like everyone else. He traced the development of the planet from the first early settlers, only a century and a half ago, to the current population of slightly over a hundred million. By emphasizing the successes of the past and the promise of the future, Van built confidence, he hoped, in the government's ability to handle the current crisis.

He admitted that when, a few days previously, millions of counterfeits had appeared mysteriously all over the planet, the government had rushed new money into print to replace the old. This morning's fall—perfect copies of the new, as yet undistributed m o n e y—had, however, quashed that plan. "Even so," he said, "your government has a new plan of action to ease the situation until a more permanent solution can be put into effect." He paused, and looked directly into the camera. "For the time being, postage stamps will be used for money. Everyone will be issued unused stamps in an amount exactly equivalent to the amount of their bank accounts—on the assumption that no-one will yet have had time to deposit much of the counterfeit."

He smiled his warmest campaign-type smile. "I fully realize that this will cause some temporary inconvenience, but I know without asking that the citizens of Palani will stand by their government in this time of crisis." The camera swung, then, to a picture of the Palanian flag waving against the sky, and the first deep notes of the planetary anthem swelled in the background.

VAN LEFT the broadcast room, and walked briskly

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down the hall to his office.

Merrill was there waiting. "Good speech," he said. "Do you think it will do the trick?"

"Well," the President shrugged, "I guess we will just have to wait and see—and hope in the meantime that the general can get hot on an effective counter-action."

The intercom on his desk buzzed sharply. "Sir, Minister of Labor Mason is here."

Catching Merrill's eye, and frowning slightly, Van turned to the intercom. "Thanks, Barbara, ask him to come right in."

A short man with disheveled hair, and a tie draped loosely around his neck entered the room, nodded briefly to the finance minister, and walked directly over to the President. He slapped a handful of papers on the desk. "Telegrams. From every important manufacturer on the planet. Unions are calling strikes like crazy, and most of the workers have already walked out. No pay, no work, and money obviously won't do."

He ran his fingers back through his hair, heightening his wild appearance, and tugged morosely at his tie, pulling the twisted fabric even farther off his neck. "You know, if this lasts we are going to be in a hell of a jam. Palani has trade contracts with other planets that simply have to be met if we are going to stay in business." He turned abruptly to Merrill. "This gimmick with the postage stamps had better work, and fast! Frankly, if it were up to me, I'd concentrate on making coins; they'd be a lot more expensive to counterfeit than paper, and..."

THE TELESCREEN suddenly flashed the image of the capitol's police chief. "Mr. President, sir, I urgently request that you remain in your office until further notice. Somebody has got a small riot going near the capitol, and it looks like it might spread."

Van frowned. "Okay Chief, but restrain your men. I don't want any serious trouble. What seems to be the cause?"

"Can't rightly say, sir, but apparently it's in connection with your speech. May I suggest that you tune in one of the local tv channels?"

Puzzled, Van punched one of

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a row of buttons. The chief flipped off the screen, replaced by a fast talking anti-administration commentator. "...and so, friends, when carefully analyzed in this manner, the President's postage plan is revealed to be nothing but a gigantic stick-up, a clever scheme to rob the poor for the benefit of the rich, power hungry administration. For, only the rich keep all their money in bank accounts. The rest of us who slave for a living and keep our poor savings safely at home are now to be robbed of everything! Well I say that a man's home is his castle, and just because he doesn't have a rich bank account is no excuse to..."

Van's fist snapped off the set. He stared hard at the empty screen, feeling sick. "Why does he do it?"

Silence.

Mason coughed. "Just before lunch, someone told me that there was a run on the seed stores by people getting ready to grow their own food. I laughed." He paused. "But, it doesn't seem so funny now."

"You see, Mason," Merrill said, "we can't make coins, because Palani is critically short of metals. But, even if we could get the metal, it would take us months to mint enough —and we can't wait months. Something has to be done *now*."

Across the park that fronted on the capitol a gathering crowd could be seen waving placards and banners that were too far away to read. Shouts could be heard from time to time, but "money" was the word that could be most clearly understood.

"Well," said Mason, tugging at his tie, "what *are* you going to do?"

EIGHTEEN hours later, Van had to admit, grudgingly, that the problem had, in a manner of speaking, been solved for him. When he awoke, the crowd had disappeared, and the air was floating with current Palanian postage stamps. The counterfeits, were, of course, perfect.

He had slept fitfully in the building, and was early at his office. His secretary wasn't in, but waiting at the door was a man he had seen frequently. Ambassador Bowdle, from Wai-

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pio, the largest planet of a neighboring solar system, and Palani's biggest customer for manufactured goods.

Ambassador Bowdle bowed ever so slightly, and stalked swiftly into the office after Van. He extended his hand. "Good morning, Mr. President."

"Good morning, Ambassador." Van flashed what was intended to be a particularly disarming smile. "I hope we may be of service to our friends on Waipio."

The Ambassador came right to the point. "Our government, Mr. President, has disquieting news about a rather startling devaluation of Palanian currency."

The smile became somewhat strained. "Oh, ah, purely a temporary condition, Ambassador. An incident, of no importance to Waipio."

"Umm," said Bowdle, watching a small cloud of stamps blow swirling past the window. "Hardly so. In the past three days, Palani's credit position in the Intersol Bank has been seriously jeopardized. My government cannot afford the risks of trading with a planet that has worthless currency."

Van's shock was plainly visible; he couldn't help that. Slowly, he lowered himself into his chair. "Loss of Waipio's purchases would be a very severe blow to us, Ambassador. Couldn't we work out some sort of barter arrangement, a trade of raw materials for manufactured products?"

Bowdle frowned, obviously uncomfortable. "I'm sorry, sir, negotiating the details would take months—particularly as the majority of Waipio's raw materials are committed elsewhere. We simply can't wait months. And, besides, I understand that most of your factories are closed because of strikes." He extended his hand again. "We will, of course, be pleased to negotiate again once financial stability has been restored. It has been a pleasure, Mr. President."

Van shook the hand, limply. "Thank you for coming." He stared thoughtfully for some minutes at the door that closed behind the ambassador.

OUT OF HABIT, he reached across his desk to the inter-

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com and pressed a button. "I'll have my coffee now, Barbara."

His secretary's voice came right back. "I'm sorry, sir, all the restaurants are closed today because of the money problem." She paused. "I have some instant, sir, that I'd be glad to make up for you."

"Thank you, Barbara, I'd appreciate that."

Well, he thought, here we are. Stores and restaurants closed; unions on strike; production at a standstill, and interplanetary trade contracts cancelled. He banged his hand flat on the desk. And we don't even know who's doing it!

Barbara slipped in quietly and handed him a cup of hot coffee. She seemed, Van thought, hesitant and unsure of herself.

"What's the trouble, Barbara?"

She fumbled briefly for the right words. "Sir, if it's all right, I think I'd better leave now. My family is moving to the country to grow food, and they need everyone home to help."

"You're leaving the city?"

"The neighbors are, too," She saddened. "It seems sort of scary, somehow. Like wartime."

Drumming his fingers slowly across the desk, Van fought down the feeling that an enormous house of cards was starting to collapse, with him inside. "Sure, Barbara," he said. "Go ahead."

She opened the door on the chief of the capitol message center, who staggered in carrying a three-foot stack of radiograms and teletypes. He dropped them on Van's desk, and wiped the back of a hand across his brow. "Here. Now I'm quitting, too."

ONE GLANCE confirmed Van's guess. From every city on the planet, notifications of more factories closing and, more important, municipal employees absent, policemen and firemen failing to report for duty, planetary communications facilities rapidly closing down.

"You know, sir," the communications chief added, "I understand the armed forces are having difficulty. Mutiny, in fact. I guess the soldiers won't work without pay, either. Can't say as I blame them."

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Van jumped to his feet. "Nonsense! The general would have called me."

"He can't; telescreen network is closed down."

Whirling around to the screen, Van rapidly punched a series of buttons.

Nothing.

"Good Lord!" He staggered back to his desk, and sank into his chair. He looked up. "Chief, do me a last favor before you quit. Send out just one message, then put the teletypes on automatic receive."

His message, a plea to the United Planetary Federation for immediate intervention in Palani's behalf, was the last one sent. Afterward, the communications chief drove out to his brother's place in the country, not quite making it before his vehicle ran out of fuel, the refueling stations being closed. There, he settled down to the business of growing food.

Van gave one last order. At Merrill's suggestion, he directed that the government grain warehouses be thrown open to anyone who wanted to use their contents as seed.

That afternoon most of the ambassadorial staffs residing on Palani were ordered back to their own planets. Within the week, the armed forces had almost completely disintegrated. In some areas, local commanders managed to keep their units together longer than elsewhere, but the end result was essentially the same. Self-preservation, the need to feed oneself and one's family, was a more urgent necessity than the protection of the planet, or the maintenance of its economy.

MOBS FORMED, rapidly becoming destructive without police control. Van and the finance minister quietly moved into a fully-equipped apartment in a hidden capitol subcellar. It was impossible to contact the other government officials.

"Fortunately," said Merrill, gloomily eyeing the windowless walls, "if we run out of candles we can always burn money."

"Don't try to be funny," Van snapped. "This place has it's own generator and enough water and food to last for months." He paced back and forth across the room. "Damn! Whoever our enemy is, he is clever as hell! A direct attack would unite Palanians and we

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could probably defend ourselves pretty well. But this . . ." he waved his hands helplessly in the air, "this counterfeit business makes the government look ridiculous, and turns people against *us!*"

"The truth is," added Merrill morosely, "they have accomplished more in a couple of weeks that they could have otherwise in months. Yet, they haven't actually destroyed a thing—no one has even been hurt." He looked at Van. "What do you suppose they will do next?"

Van shrugged. "Invade, probably. Though I guess it depends on what the United Planetary Federation decides to do about my request for aid."

"Has the UPF ever got around to doing anything about anything?"

"Well," said Van, "if we are invaded, at least we'll know who our enemy is."

EIGHT WEEKS later, they climbed stealthily out of the hidden apartment, through the ransacked capitol, and out into a quiet, empty city. Their footsteps echoed in the streets as they walked slowly along eyeing the broken windows and occasional swinging doors. "Looks like things were a bit rough for awhile," ventured Merrill.

"Seems quiet now, though."

As they neared the city's northern edge, they began to notice several houses that were inhabited and numerous horse-drawn carts in the streets loaded with assorted vegetables and fruits. About three dozen farmers were gathered noisily around a large open stand, set up in the middle of the street, and a steady stream of wagons and carts were entering and leaving the area. To one side, small groups of women were standing around talking, while children ran laughing-screaming up and down the alleys between the buildings.

Van stopped. "Well, I'll be damned. A farmers' market!"

"It can't be," said Merrill. "What can they possibly use for . . .?"

At that point, a short man dressed in faded dungarees shouted at them from the center of the stand. Then, with a quick burrowing motion, he broke through the small crowd and ran up to Van. "Sir! We

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have been looking all over for you."

Van looked blank for a minute, then, "Mason! What the devil. . . ."

The minister of labor turned and gestured proudly towards the stand and the milling crowd. "It's a sort of trading post. Farmers who raise fruits meet others here who raise vegetables and they trade, so much of this for so much of that. Sometimes we arrange five and six-way swaps. For providing the stand, and taking care of the bookkeeping," he added, "I get three percent."

MERRILL snapped his fingers. "Of course! A barter economy! The obvious solution." His eyes held a sudden far away look. "You know, in a couple of years, we could evolve a planet-wide industrial economy based entirely on barter."

Van snorted. "It's hard to visualize a factory meeting the weekly payroll with oranges."

"No, no," said Merrill, impatiently. "We'd issue script, paper money, worth so much fruit or. . . ." He stopped, embarrassed.

Mason burst out laughing. "You see, you'd be right back where we started. Money, the eternal lubricant—can't have an industrial economy without it."

Then, soberly, Mason pulled the two off to one side. "Listen," he said, quietly, "whoever tossed all that counterfeit at us didn't do it just for kicks. What's their next move? Not," he added, "that we can do anything. The military has disbanded, and everybody is too busy raising food to do much about defense."

"I know," said Van. "That is exactly why I don't think we will have long to wait. But, I wish to hell we could *do* something!" He turned to Merrill. "Come on, let's walk back to the communications center and see if anything there is still working."

Mason moved towards the trading stand. "Keep in touch."

Van nodded. "Right." He and Merrill walked rapidly back to the center of town, the empty part of the city.

OF THE TWO automatic receivers that were still connected, one, Van saw, had

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developed a short and was clattering erratically. He shut it off, then went over to the other and glanced at the "in" basket.

"Good Lord, a message!" Shaky fingers clutched the thin paper.

> TO: Van M. Dahl, President, Palani Sector S-145, Area 10
> FROM: Minor Planets Dept., United Planetary Federation
> Re: Ur. Msg 4/27
> General Council of the United Planetary Federation is presently on annual vacation, but scheduled to convene within four months, at which time your request for intervention will be brought to the Council's attention. However, a careful study of the facts pertaining to your situation leads to the conclusion that your problem is primarily one of monetary depreciation, ie., inflation. Inflation is an internal matter, and it is doubtful if the Council will see fit to...

There was more, but Van didn't bother with it, for suddenly he saw that plans needed formulating, work needed doing, and there was very little time—the invasion was sure to come now, any day. He dropped the paper and ran out after Merrill.

THE INVASION came, as a matter of fact, four months later. Exactly six months from the day the first stray wisps of Palanian currency tumbled from the sky, twenty-seven space cruisers bearing Palanian markings dropped to a landing just at the outskirts of the capitol, not far from Mason's trading stand. As the ex-labor minister watched in unconcealed amazement, several thousand troops wearing Palanian uniforms disembarked and marched into the city, accompanied by various pieces of military equipment, also marked with Palanian insignia.

"I'll be damned," he muttered. "Counterfeit people!"

The men from the ships spoke perfect Palanian, and referred to Palani as "home". However, they set up a new government that differed from the old in that, as the new

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President explained, elections were permanently suspended.

In a few days new Palanian currency was distributed. Within two weeks, the video networks were functioning again; and in a matter of months most of the factories were in production—straining to meet the new government's quotas.

The old government was officially charged with conspiring to destroy the economy, and there were frequent arrests at night.

When a sad, bedraggled Mason appeared on the telecasts one evening, accused of helping to "bankrupt the working class", Van and Merrill congratulated themselves on their prudence in leaving the cities far behind.

THEY STOOD together at the mouth of the cave, watching the sun slowly set.

"At last," said Van, "we have an enemy to fight against. Imagine, pretending to be Palanians!"

"It is an interesting stunt," commented Merrill, "but, not very clever. Makes it easier for the people to compare their administration and ours." He smiled wryly. "To our advantage."

Van nodded. "In spite of all the pretending, the new men are conquerers, and conquerers have one fundamental handicap. They can never give people freedom, and freedom has been basic to Palanians for a hundred and fifty years.

"It's a big planet. They'll never find us." His eye rested momentarily on the faint veil of smoke from a factory far, far in the distance. "And in a year or so, when we find out who our new masters are, and people grow restless, it will be easy enough to organize an effective opposition."

Together, they turned and gazed with admiration at the immense printing press that occupied most of the cave, at the thousand gallon drums of ink, and at the thousands of rolls of special paper that were stacked ceiling high in the back.

"We will even have our own men on their printing staff. Copying their plates will be a cinch."

Merrill sighed. "True," he said. "But, until then, what will we do for money?"

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Editorial

NOT ACCORDING TO NEWTON

ASK THE man in the street about Newton's "laws of motion", and (assuming he's had any memorable encounter with physics) he'll probably tell you that for every action there's an equal and opposite reaction. I put "laws of motion" in quotation marks because, even when fully and correctly stated these are not "laws". The equal - and - opposite - reaction - to - every - action proposition is an attempt to describe continuous phenomena in the universe around us. *The proposition may be true,* and then again it may not; but the description has turned out to be a useful one.

Except when applied to human relationships, both individual and group. Here we have found that action does indeed beget reaction, but it is (a) seldom equal (b) not always opposite (c) certainly not always instantaneous. (While in instances of motion, the reaction occurs simultaneously, so far as we've been able to discover.)

Which is one reason why politics is not a science, and cannot become a science in the visible future. The successful politician is one who is able to gauge the extent and general nature of human reaction to a given action with a higher batting average than his rival. At times he'll hit it on the nose, by which I mean that he will have accurately assessed the probable reactions to a given action, insofar as his goals are immediately affected. Just about every human being has this ability to a greater or lesser extent. The politician, however, has to deal constantly with large-scale group reactions, or highly complex individual reactions, while the ordinary citizen only has to play such a role at times.

IT'S AN ART, not a science, because we simply do not have enough reliable propositions which "work" the way a so-called "scientific law" works. All we have are general prop-

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Doorways To Infinity

Novella

by George F. Forbes

illustrated by EMSH

The object was nearly the size and shape of a half-dollar. It had a round, raised double rim about twice its thickness. It was completely unstained, quicksilver smooth, although it must have been buried for years under a foot of topsoil. The flat sides were perfect distortionless mirrors. Jerry Wells started to study the "gimmick" — and the chain of events started that rocked the world ...

JERRY WELLS sat against the hog-wire fence, leaned on his shovel, and gazed lazily at the drip from the sunken bathtub. The Muscovy ducks gossiped noiselessly in the background. A thin arch of water connected a pipe fitting to a jeweled splash. The bathtub was ideal for the ducks, but the overflow formed mud with the topsoil; every drain hole Wells dug clogged itself within a few days.

"This time," Jerry mused, "a hole further from the tub should let the mud settle out." He hissed at the congregation of quackless ducks, who squawked silent objection to his invasion of their privacy. He toyed with the idea of getting a scope and microphone. Were they only pretending a noise, or was it supersonic?

Wells' daughter, Bessie, climbed over the gate. "Whatchadoindaddy?"

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The watchers could see the entire scene.

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"Goin' dig another hole. Wanna help?"

"Sure!"

"Find Daddy the hoe."

"O.K."

As the four-year-old trotted off, Wells pushed the shovel into the soft soil and started digging. Bessie scampered back, dragging the hoe and scattering ducks in all directions. With a child's enthusiasm, she started pulling the dirt back toward the hole.

"Goin' ta help Daddy."

"Not yet, Bessie."

"O.K., Daddy. Oh! Got pretty." Bessie scrambled in the dirt. She retrieved the shiny object which had tumbled from the shovel.

As she slid a large part of the dirt piled back into the hole, Jerry Wells resignedly leaned on his shovel. "Here, sit and watch Daddy and play with the pretty while...hey, give that to Daddy!"

"No."

"O.K., then sit on Daddy's lap and show it to Daddy."

AS BESSIE squirmed into his lap, Wells took the "pretty". Nothing normal could be that clean and bright; it must have spent years, at least, under more than a foot of topsoil. Nearly the size and shape of a half-dollar, it had a round, raised double rim about twice its thickness. It was completely unstained, quicksilver smooth; the flat sides were perfect distortionless mirrors. Although extremely slippery and hard to hold, it was not slimy or moist.

Jerry examined it for several minutes. Bessie climbed to her father's shoulders. The hole completely forgotten, Wells pushed to his feet and swayed toward the house trailer. Bessie did her best to make the trip erratic.

"Let's go in the trailer. You go in the house and get Daddy a glass of water. O.K.?"

"O.K., show Mommy?"

"Not yet; just get Daddy a glass of water."

"Fizz?"

"No. Water. Daddy'll get you some fizz later."

"O.K., gotta get down."

Bessie rushed off. Jerry Wells examined the object more closely. It consisted of a perfect figure eight ring frame, enclosing a perfect double-sided mirror. Remarkably, it

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seemed to have no surface friction. Held in the palm of his hand, it slid, quicksilver-like, about the lowest point.

Bessie arrived with the glass of water. The object floated, yet deeper than it should have. In his hand it seemed to have almost no weight. He tossed it in the air. It did not return to his hand but struck the ceiling and bounced to the sofa. Strangely, there was no metallic ring, but the sound was of wood on wood. Jerry placed it on his postal scale; it weighed too little. He reached to pick it up—the scale deflected before he touched it. He took his hand away—the scale returned to its original reading.

BESSIE'S incessant stream of unanswered questions had settled down to an urgently repeated, "What is it, Daddy?"

"That's what Daddy's trying to figure out."

"Can I keep it?"

"Daddy doesn't know. Hush!"

Interpreting the "Hush" as *"Daddy busy, don't bother,"* Bessie settled down to watch. She didn't want to be chased out to play.

Jerry Wells put a paper cup, upside down, on the scales. On the cup, the ring weighed almost nothing.

"Go get the kids; all of them. If you can't reach the rope, get Mommy to ring the bell."

The clang of a brass ship's bell soon filled the neighborhood. In due time, Wells was surrounded by a group of children.

"Barbie, Liz, Ethel—have you seen any of these things around the neighborhood?"

"No, Daddy."

"Nope."

"What is it?"

"How about you kids? Ray? Joey? You seen any?"

"No sir."

"Nope."

"O.K. Barbie, get a couple of bottles of fizz and some glasses."

Jerry speculated as the gimmick floated in its glass of water. He sipped slowly at his glass of home-made root beer. Except for the queer weight effect, the most unreasonable thing was its slipperiness and lack of corrosion. "Wonder if a silicone coating could make it that slippery? Something

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queer about those proportions." Wells got his micrometer. After measuring, jotting down numbers, and fussing with his slide rule, he grunted, "Size don't seem to mean anything; not multiple inches or millimeters. That 6.283 looks familiar. Yes, it's two pi! Now, why should anyone make a crazy mirror like this with a diameter ratio of two pi?"

He put his slide rule and micrometer away, dropped the gimmick back in its glass of water, locked the trailer, and went into the house to get ready for work. As temporary night shift on the company differential analyzer, he dismissed the gimmick from his mind. Generating derivatives with an integrating device was a full attention job.

NEXT MORNING, the gimmick rested peacefully on the surface of the water. The intervening hours had given Jerry Wells at least one idea. He took the gimmick outside and looked through it at the sun.

Wells could not suspect the nature of his find. True, he was engineer enough to know that the slipperiness and corrosion resistance were not in accord with the technology of his day. He was not sure about the weight effect. It was too unreasonable to be true. Possibly, it was his imagination. He could neither anticipate nor suspect the effect of a cosmic shower on a fundamental unseparated Kline Portal Pair.

At any rate, the laws of probability being what they are, a speck of dust had settled in the crack between the pair rims. The shower originated in the speck. It happened to be directed inward; enough energy got through the interface to permit transmission. The immediate result was a startled, "Yiii!" from Jerry. He dropped the gimmick and clamped his hand over his eye.

"What's the matter, Daddy?" asked his eight-year-old. She had followed him with ideas about the comic book hoard in the trailer.

"Daddy got bit, Ethel. It's all right."

Wells had shaded his eye in order to look through the gimmick. The amount of energy transmitted was many times greater than the amount re-

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leased inside the portal; the result had been a totally unexpected flare as full sunlight passed through. Fortunately, the only damage was a few persistent spots whenever he blinked his eyes. Ethel retrieved the gimmick from the ducks' pool. It offered only an innocent reflecting surface.

The incident jarred Wells considerably; it suggested possible danger. He was acutely conscious of the discomfort in his eye, and was convinced that the gimmick was hollow and empty. He was too flustered to imagine further unknown possibilities. He returned to the trailer, inserted the end of a knife blade between the halves, and twisted. With a sudden chirp of suction, Terra's first Kline Portal opened a few thousandths of an inch and snapped shut.

WELLS' FIRST reaction was disappointment. Nothing had changed; it had slipped back into its glass of water. The chirp had sounded somewhat like a knife scratch. He picked it out of the water before he realized it had not been floating.

Jerry knew nothing about the portal conservation laws and their exactness for both mass and energy; he had no suspicions as to the existence of an absolute matter and energy vacuum within a Basic Kline Pair, nor the reason for the mirror effect. He knew only that he now had a double ring in his hand instead of a disk. In his confusion he completely forgot about separating the rings. He pushed his finger through but did not notice the flow of air in the opposite direction, the resistance to his finger's passage, or the discrepancy of displacement. His finger passed the center plane of the far ring simultaneously with its passage past the center plane of the near ring.

He placed the ring on his desk, cupped his chin in his hand and his elbow on the desk. The missing mirror section puzzled him.

Ethel, seeing her father deep in thought, left her comic book. She picked up the gimmick, pushed her finger through, and looked at it curiously. She grinned. "Daddy, look, it makes my finger longer."

Viewed from inside, the

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gimmick was one ring, from outside, two. Though separated by about an eighth of an inch, the two ring centerplanes appeared coincident.

BEFORE work that evening, Jerry Wells experimented with material objects and light; he even passed an electric current through it. Pushing something through one side developed a definite back pressure of air. An object dropped through was slowed down in passing, and exerted a slight push on the rings. Listening carefully, Wells thought the motion caused a slight noise. The points of his micrometer touched inside the rings—at an appreciable fraction of an inch.

A small amount of air had entered his Basic Kline Pair. The partial vacuum held the halves together, but the trapped air had changed the Kline properties.

Jerry locked it in the wall safe and went to work. His preoccupation attracted no attention; Alice, his wife, was accustomed to it. At work, he was alone on the night shift. His friends did not see enough of him to notice.

Though Wells was not fully acquainted with his find, he appreciated its scientific value. He felt like the man who, being swatted by a playful bobcat, had grabbed a tail and started swinging. His responsibilities were quite a problem. Obviously, he didn't have the facilities to study the thing: A well-equipped laboratory would be needed for that. Aside from any basic knowledge to be dug from the ring itself, the space distortion would be valuable in special experiments.

He was not justified in keeping it for his own use. He could sell or lease it, but the government might summarily classify it secret, or appropriate it, or both. The legal complexities and the publicity would be something to contend with. Wells sensed his settled, uncomplicated way of life slipping away from him. He disliked the sensation.

NEXT MORNING, Jerry repeated his tests. The slight noise apparently depended upon the speed at which things moved through the ring. Pushing something through tended to suck air or objects

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through from the other side. Inertia seemed to increase for anything being pushed through the rings.

Though not wrong, Jerry Wells did not appreciate the meaning of the sound. The inertia of the air inside was reacting on the mass being pushed through the ring. The small amount of air passed through the inside faces at the same mass rate as the mass through the outer faces. The counter-current of air also misled him. It was due to the equilibrium conditions at the interfaces. It was increased by the friction of the air inside the pair. The sound misled him as to the ring material. This material reflected everything and passed nothing. It was a perfect conductor of everything along its surface; a piece of hair, caught between the rings, was conducting the sound out.

In due time, Jerry ran out of ideas. Worried about the ethical problems involved, he hardly noticed Spots, the cat, as she jumped from the floor to his lap. Spots comforted down to absorb that attention which is the inherent right of all cats. The shiny object on the desk attracted her attention. She climbed up, gave it a tentative nudge. Nothing happened. It felt interesting, so she sniffed it. It smelled acceptable.

She gave it a playful swat. It hit the wall with a queer snap, and fell in two parts. Spots pounced on one piece. The second lodged between the wall and a box of radio parts. Spots pushed her paw through the first ring. She struck the wall beyond the second ring. Noticing that her paw had disappeared, she snarled at the ring, removed her paw, arched her back, backed into the wall, and simulated a head-on pancake.

JERRY REASSURED a very scared and trembling cat and picked up the ring. Looking through it, he saw dimly-lighted wood. He inserted his thumb and pushed on the wood. The ring moved. He held the ring and pushed hard. Nothing happened. He pushed a heavy screwdriver through, grasped the ring, and shoved hard. The screwdriver moved, and the heavy box at his feet slid out from the wall. Ethel,

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attracted from her comic book by the cat, looked at the box; it had moved without being touched. She started shrieking at the top of her voice.

"Hush! You needn't be scared just cause Spots was. Here, hold the pretty." Jerry handed her the first ring. He reached behind the box for the second. As he turned it over Ethel giggled. He glanced over. She was looking through her half to see him looking back at her. She pushed her finger through and almost poked him in the eye.

"Daddy has to get ready for work," he mumbled. He took the ring from Ethel. The two rings were obviously effectively one; they had a common interface. Jerry felt that the bobcat had grown considerably bigger.

This time, not only did he put the rings in the wall safe, but he changed the combination. He was late for work, almost wrecked his motorcycle, and accomplished absolutely nothing at work.

BY THE END of the shift, his mind was in complete turmoil. He was familiar with the Moebius strip and the Klein bottle; this was something similar. A three or four dimensional version of a Riemann space, or a what-might-you-call-it. He reasoned he could put a rod between the rings, push them together, slide the rod half way through, and weld the ends together. He would then have a straight rod, several inches long, with no ends!

Arriving home from work next morning, Wells got the rings from the safe. He stood in front of the living room heater and tossed them in his hands as he warmed himself. He idly slid his finger through one and watched it wriggle at him from the other. He imagined a sort of tingling inside his finger, and quickly jerked it out. His finger seemed slightly warm, just enough to notice. It had not easily pulled from the ring.

Jerry was tired, but had too much on his mind to permit sleep. Perhaps doing something specific would help. He went to the trailer. There he found a bottle of mercury left over from an earlier electrical gadget. Sure enough, the rings

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would sink. He fished them out, placed them together, and dropped them back in. He had to spread them apart again to let the mercury in, but they finally sank. He put the bottle in the wall safe, locked the safe, and went to bed.

PHILOSOPHERS and theta experts have debated Jerry's correct action. He himself could throw no light on the subject. He was sleepy. He had to do something if he expected to sleep. He hadn't thought about it.

Nevertheless, among the countless different life forms in the sphere of the known universe, Terra still holds the record. Almost unaided, Jerry Wells had stumbled onto the secret. He did it in one fifth the time of the next best. Even then, the Klorians had been actively trying to duplicate their pair.

As would be expected, Wells found three Kline pairs when he opened the safe next day. One pair was smaller, one larger. They fitted exactly into each other. They were difficult to separate. It was difficult to push things through the new pairs. They heated up and somehow, did not seem permanent. This last Jerry verified by hammering on one of them with a cold chisel. After a few blows, both the ring he was hammering and its mate collapsed. A terrific but soundless and harmless "explosion" startled the neighborhood for miles around. The few newspapers which mentioned it became collectors' items.

The collapse phenomena is never localized nor uniformly distributed. Records of the national police of the time indicate an unsuccessful undercover attempt at localization. The focal point appeared to be in a large field more than a mile from the actual source.

Jerry Wells deserved credit for appreciating his find. As he remarked some years later, "I felt like someone in 1900 trying to predict the effect of the automobile in 1960." He concerned himself with the sociological effects and the rebound on him personally, rather than with the problem of what the gimmick was or where it had come from.

He decided upon a course of action. He could make about

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two sets of pairs a day; in a month there would be plenty of non-traceable envelopes in the mail. He felt sure he would not get involved in the turbulence he would generate. He underestimated the priority to be assigned to the matter by those concerned with such things. His original Kline pair now connects Galactic Museum with its Terran Branch.

II

THE CREATURE could not be described in human terms. A spider, or perhaps an anemone, might serve to suggest, but human concepts could never form an adequate description. Physically, the creature differed from humans more than humans differed from any other Earth life-form. The creature's various associates could not be included in the comparison. They differed from humans in varying degree, and from each other. Humans knew nothing of them, and misinterpreted their occasional evidence.

Its name was Ard; it had evolved from an immobile entity which subsisted by lying in wait for its prey. It was Ard's nature to wait and watch. Ard had waited and watched for many centuries. To Ard the concept of loneliness was alien; there was no purpose in contacting a companion, even to mate. Every few centuries a conglomeration, of the tenuous complex of gasses which was Ard, separated itself. Motile, even less destructible than Ard, its first action was to evade Ard's influence. Accomplishing this, by sufficient distance, its supplemental motivation became predominant. It searched until it found and fused with another entity like itself, preferably not of Ard.

In Ard-kind's original environment, such was practical. Ard-kind had evolved, however; it was now an integral part of a vast symbiosis. For lack of a better term, this symbiosis might be called a galactic civilization. Ard-kind's present scattered distribution throughout the galaxy, and their reproductive process, would normally lead to extinction. Indestructible though they were, accidents could, and did, happen. They were indifferent to the process; each in-

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dividual was sufficient to itself. Ard's potential offspring normally passed through Ard's ring, to be collected by some less phlegmatic life-form. Ard-kind were useful, extremely so. Few life-forms served so effectively as watch-dogs.

THERE COULD never be enough Ards to monitor all non-portalled life. However, the teeming life of the universe permitted even such an inconsequential place as Earth to be adequately covered. Several dozen varied and random life-forms were on watch; to Ard was given, as prime responsibility, the portals.

Ard-kind's possession of the rings stretched far, far back in time; they were an intimate part of Ard-kind's evolution. In their roamings throughout the galaxy, the rings formed essential link. They could survive, as individuals and as a life-form, away from the unique environment of their ancestral home. Neutrons, Alpha, Beta, and Gamma radiations sustained Ard. He was supplied through the ring.

Watchers by nature, Ard-kind were well content to serve as such. They were ideally suited; they could become a part of what they watched. Ard could communicate. Even the formidable knowledge of his kind was inadequate to explain the method. It is permitted that a being, incurable in spirit, no longer able to control or contact its physical body, might be used by such as Ard. Perhaps by disease, perhaps by accident, certain humans could be considered as lacking volition. Ard's inherent power, and human-kind's latent power, permitted Ard to select and use as required. If, in so doing, he cured. . . so much the better. Ard was not required to help; he was required to avoid unnecessary harm. In galactic terms, interference was permitted only when requested and mutually accepted. Those of Terra had not yet been permitted to ask.

Therefore, Ard selected only true non-conscious incurables. Ard could never have been sure about so alien a creature as a human; Ard could never know that the choice had been both informed and permissive.

IN THE GALAXY, disapproval was a common de-

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nominator. Though least susceptible to it, Ard was, by that very fact, least likely to need it. In Ard's case, the whole question of galactic approval or disapproval was academic. As for humans, so for galactics; atheism was an individual decision. The obvious galactic pattern occurred in much the same way in the development of each life form. This made atheism even more untenable for galactics than for humans. In short, Ard belonged to a spiritual rather than to a military organization.

Even the combined sciences of the galaxy were not sufficient to locate a joined portal. Ard had equipment which could locate a portal in use, provided it was one of the several nearest; provided there were not more than a few dozen within a light year; and provided the mate was not within that light year. Such was accepted as inadequate. It was the best available.

The collapse detector was the portal-watcher's most valuable tool. With it, Ard could detect and localize a portal collapse. In his ancient dwelling below the Mississippi delta, Ard thus came to know Jerry Wells. The disconcerting effect of Ard's initial contact was hidden in the discomfort of Wells' closeness to the collapse. Had one of Ard's human arms been closer, the portal might have been stolen and Jerry compensated for the theft.

Ard dared not tamper with an active intellect. Not only was it morally and legally forbidden, but his natural powers were sufficient only under ideal conditions. The normal localization contact was approximate; it was not fully within Ard's control. Having been justified, and thus made, Ard's instincts automatically gave Jerry Wells some degree of guidance and protection. However, Ard's only permissible actions were too late. Ard notified his superiors, if such they could be called, and awaited their decision.

THE GALACTIC order was essentially symbiotic. Human kind would not be helped until humans had progressed, at least beyond constituting a threat to neighboring lifeforms. Even then, the help

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must be needed and must be asked for.

Ard's superiors were faced with the problem of determining the necessity of action. Terra's nucleonics had already led Ard's associates to carrying out standard transplant procedures. The extinction of the endpoint of millions of years of unique evolution was not something the galactic order took lightly. However malignant a life-form, it would never be completely eliminated.

The transplant having already been completed, there might be no hurry. If a threat developed, Terran life could be damped or de-civilized. If Terrans triggered any one of several possible accidents, the transplants could eventually be returned and the problem of the rings would thus become irrelevant.

Prime consideration was the possibility of premature dispersal. Possession of the rings *could* cause technological explosion of the Terran form throughout the galaxy. If humans were not yet ready, the effect could be infectious or parasitic, rather than symbiotic; such a possibility might require emergency action. At least, the watchers must be reinforced with more carefully selected life-forms. It might even be possible to find watchers compatable with Terran environment. That is, similar enough to survive, yet different enough to avoid harmful sensitivities and interactions.

Ard's superiors quite rapidly came to a preliminary decision. Because of the rings, Ard would be allowed to help cooperatives. Interference with the efforts of belligerent anti-cooperatives would be permitted, particularly if they had a ring. However, he must not interfere with the in-between seven-eighths, which were classified as non-destructive competitives. Ard and his associates were specifically instructed to prevent destructive use of the rings.

III

WILL O'BRIAN was worried; the Party would want an explanation. Obviously, he hadn't been around when it happened. They would figure that was an omission on his part and make

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the most of it as a deviation or something. He continued digging information from his son.

"Junior, why didn't you tell me about it? You were home."

"Aw, Pop, I didn't think it was important."

"You're old enough to know; the Party thinks everything is important."

"I'm not in the Party."

"You're going to be. You better start learning now. You'll get enough education to amount to something in the Party, or I'll know why. Unnerstand?"

"Yeah, Pop."

"Now, what about it?"

"It was just like an explosion, 'cept it didn't make any noise. Started all the dogs barkin', and all the kids cryin'."

"What kind of an explosion?"

"Oh, kind of a jar or thud and kind of bouncing up and down, or in and out, or somethin'."

"Is that the best you can do?"

"Remember the time the wheel came off that big truck and the axle made a dent in the street?"

"Yes."

"Somethin' like that."

"What else you find out?"

"Kids are talking about it. They don't know what it was."

"Well, find out. What's new in the neighborhood?"

"JOHNNY'S Dad forgot to stop at the stop light."

"Oh—that wise guy. Knows so much! Did he get a ticket?"

"No, just got in an argument with a truck driver."

"You see it?"

"Yeah, wouldn't argue until the truck driver started pushin' him around. Then stood up and told the big guy off. Truck driver backed down. Funniest thing I ever saw. Little guy like him."

"Too bad he didn't get slugged."

"Well, I like him."

"How'd he happen to sneak the light?"

"Absent-minded I guess. Been working late in his trailer."

"His book?"

"No, he found something in the yard. Been fooling with it all the time. Guess he was sleepy."

"What? A bomb? Did you see it?"

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"Naw. Ray saw it, though; now *he* wants one."

"What did Ma say? How much they cost?"

"Donno. Ma asked Johnny's mother but she didn't know anything. Ethel was scared of it, so Ma said no."

"Ethel?"

"Johnny's sister."

"Get Ray."

O'BRIAN couldn't make sense out of his youngest son's description. The first-grader just thought it was pretty. Ethel had screamed about it. He wanted one. Reluctantly O'Brian called his teen-age daughter.

"Yes, Dad?"

"Pat, what d'ya know about this here explosion the other day?"

"It scared everybody, but none of the kids know anything about it. I'm sorry, Dad, but I won't find out about it if it's any of your Party stuff."

"Oh, all right—you're just like your mother. Aren't you curious?"

"Yes, but not for the Party. Science teacher has us all trying to find out about it."

O'Brian had a lot more respect for his daughter than he liked to admit. When she decided that Commies were twerps and trouble makers, he had tried to argue with her. His success had been less than with his wife. Pat read too much. At least, the wrong stuff. The books he got from the Party, she just quoted and laughed at. The books she read, he had never heard of, but his comrades said they were anti-Party and lies. O'Brian couldn't quite understand. The Party people made sense to him; why couldn't Pat and her mother see it?

"Well, let me know if you find out anything."

"Oh, Dad! You wouldn't understand anyway."

The following day was Saturday. Junior talked around the neighborhood. He got some idea how far the explosion had carried; at least that gave his father something to report.

O'Brian didn't mention Jerry Wells in his report. The Party would only make him snoop, and he didn't like to snoop. Rough someone up, yes; but snooping—least of all snooping around that guy Jerry—no. He didn't want to.

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IV

THE PLOTTER whirred and plinked. Each plink left its mark on the plotting table. The card reader kla-plunked in accompaniment. Gradually points accumulated on the map fastened to the plotting table.

"You must have lost some cards. Did you ever sort them by areas?"

"No, we didn't. Those are the coordinates from your map data. They're plotted without sorting. Want 'em sorted?"

"No, it just looks like a gerrymander. I'll take the cards and all the other stuff."

"If it looks like a gerrymander, that's what it is. The computer couldn't be wrong . . . at least, not that way. We couldn't make that kind of mistake. Pete, give him the master cards and the tabulation."

"Thanks, no offense. Didn't think you made a mistake. Just had to be sure."

"If you could tell us what it's all about, we might be able to help. That is, the machine might."

"No, it answers our questions."

"How so?"

"It ain't normal!"

The disgruntled programmer was a puzzled customer. "Least he could do was tell us enough. We probably could help him. These home office boys are too conceited. Don't tear down the board, he may be back."

The "home office" boy dropped the cards and tabulation into the "SECRET" basket. After filling out a report form, he added, under recommendations: "Highest priority, does not follow saucer pattern".

THE ARMY truck pulled up to the fence surrounding the settling flats. The park department man walked to the gate, opened it, and stopped to gossip. "What you got in there?"

"Just some test stuff. It's classified."

"Goin' ta put up a missile station in there? Foundation's no good. Lots of quicksand and stuff. Say, what's goin' on? Opinion poll people been asking all about that explosion. Asked all over town. Funny thing, didn't make any noise. Say, ain't that a radiation sign on yer truck?"

"Yeah, it's real dangerous. If

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you're going to stay around here, we better give you a film badge."

"No sir-ree. I'm gettin' outa here. Why didn't ya tell me?" He scrambled into his car, slammed the door, and backed around with a roar. "Be sure you lock that gate," he shouted as he left in a cloud of dust.

"You shouldn't have told him that; he'll have the whole neighborhood up in arms."

"Oh, it'll be dark soon, and we'll only be a few hours."

"Need any help with your radioactives? I'm only a radio man."

"No, thanks; I can handle it. Just be sure you cover the whole spectrum real fine."

"O.K., O.K., you home office boys are eager beavers."

The men in the truck adjusted knobs, aimed equipment, and peered into dials and scopes for the better part of the night. Result—nothing.

* * *

WILL DISLIKED Party meetings anyway. Being on the carpet made this one real rough.

"Comrade O'Brian, you're the one who thought it wasn't important. Why was that army truck at the settling basin?"

"Didn't know about it."

"That park man blatted all over your neighborhood. Where were you?"

"Just didn't hear about it."

"The truck was full of radioactives, did you know that? What do we give you a counter for? They cost the Party a lot of money. Don't you ever look at it?"

"The counter was working; it didn't show anything. I can show you the record."

"Where do you keep it? In the cellar?"

"No cellars around here!"

"I know that, stupid. Where do you keep it?"

"In the attic. It reads my watch dial from the street."

"All right. You sure you're not faking the record? No—you couldn't, you're too dumb. Sit down."

"Yes sir, Comrade Brown."

Brown, uncomfortably anticipating his own reception at downtown headquarters, chewed out the others. "You people have got to get on the ball. They've swamped the area with leg men on a fake public opinion poll. I want descriptions of these men, and I want

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them in writing. If they're in my mug book, you better be able to identify them. Something is going on around here. We don't know what. The Party helps you to get good money in those jobs in the aircraft plant. That doesn't mean you close your eyes and ears to everything else. I'll be back next week. You'll have something then . . . or before! Now get busy on that mug book."

"O'BRIAN, you sure this is worth the trouble?"

"That's what *you* said, Comrade."

"Don't call me 'Comrade' out here. Now, just why are you suspicious of this fellow. Jerry Wells his name, you say?"

"He's been acting funny—holes up in his trailer; climbs trees in his yard."

"What's he doing in the trees?"

"Seems to be just driving nails."

"What's he do in the trailer?"

"He *was* writing a book on computers. Kids say he hasn't been working on it. Turns the lights on and off a lot. There . . . they just went off."

"Well, let's go over there. Now be quiet. Stay in the shadow. That moon's too bright."

"I don't like to. Have to be friends so they'll talk to me. If they catch me snooping, they won't talk."

"O'Brian, you're not snooping—you're investigating for the Party. Now, keep quiet and stop interfering."

"Yessir."

* * *

JERRY WELLS sat at his workbench. He poured a test tube of used lube oil into a ring. He looked through the ring and grinned. He poured again, and grinned some more. The sounds of whispered conversation came through the ring.

"I tell you, something leaked on me. It's in my hair, and it's slippery."

"Birds, O'Brian, Birds. Shut up."

"Yessir."

"Hell! I got it, too."

"Let's get outta here."

"Shuddup, you can take a bath."

"I'm scared."

"Coward, sit here and wait."

"Maybe it's radioactive."

"Forget it and shut up."

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Jerry looked through several different rings. He finally selected one; this time, he used ice-water.

"I'm stabbed," shrieked a voice. Brown's feet pounded across the yard; partway, he tripped over a tricycle. "It's got me!" He scrambled to his feet again and stumbled off in a random direction. He collided with the concrete block fence, tumbled over, and dashed off down the moonlit street.

Jerry listened through one of his rings. He could plainly hear O'Brian's teeth chattering. He did not have a ring in a convenient position. He tiptoed quietly to the other end of the trailer and returned with a seltzer bottle. Carefully he sighted through one of the rings. Holding the ring firmly, he pushed the nozzle through and squirted. O'Brian did not scream; he was too busy running.

Wells sat back in his chair and thought about the incident. "The Party!" he said to himself. "Think I better put those things in the safe. Have to do it in the morning. Wonder if they know anything. Sound like burglars, but they might get someone bright interested. Better let the ducks into this side of the yard. They make good watchdogs, particularly those crazy geese. About time to start in on the door. Have to hide the by-products in the attic. Should be safe there. Wonder about that yard-cleaner, Joel. No, he couldn't be one of them. No one could pretend to be a spastic. Kids like him, anyway. That is, after they got used to him. Wonder why Alice hired him, anyway?"

V

THE FAT man gazed stolidly at Brown. Brown squirmed in his chair. The fat man sat quietly and continued to gaze. After several minutes, the fat man asked, "You say he had his yard booby-trapped? How?"

"I don't know. It was dark. O'Brian said he'd been working in the trees. We didn't see anything."

"You're supposed to know. Why didn't you stay to find out? Maybe the Party made a mistake in your case. People at your level aren't supposed to chicken out."

"He turned a hose on us!"

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"O'Brian stayed longer than you did. We expect more from people of your caliber."

"He nearly killed O'Brian."

"O'Brian looks healthy enough to me. What did he do to you, O'Brian?"

"Don't know. It wasn't water. I left so he wouldn't catch me snooping. I have to be friends with my neighbors; that's what the manual says."

"All right, O'Brian, you can go; you did a good job. Brown! Stay here."

O'Brian was glad to leave. He bumped into a table on his way out and shut the door too hard. He hadn't wanted to make Brown look bad, but it had turned out that way; he was afraid that Brown would decide to get even. He wondered what was going on inside the room.

"Brown, the Party does not tolerate inadequacy. You will not be transferred, but this will be put on your record. Any further instructions for you will probably come through O'Brian. You may go."

Brown, not ordinarily a temperate man, and not ordinarily lacking in conceit, had been painfully deflated. Worse than that, O'Brian, whom he despised as a stupid lout, had been the hero. He stopped at a liquor store on the way home. It took him several days to sober up.

THE FAT man picked up his phone. He dialed, then listened a few moments. He coughed. A voice answered with a name and a coded question. The fat man answered, "174 Steel Street. Phone out of order. Put in an outside bell."

Several more similar calls were made. Jerry Wells' phone was checked and some wires added. An insect exterminator salesman found the wall safe, other possible hiding places, and the house layout. A board of health man inspected the duck run for fly and mosquito sources and planted a bug in the trailer. He inspected the trees carefully for "insect control". He found only the nail holes.

The fat man found a nearby room for rent sign. A week later, he acquired a motorcycle, same model as Jerry's. His throttle lead broke in front of Wells' house while Jerry was at home. The talk turned to science-fiction and to computers

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—but not to Wells' work or anything Jerry had reason not to talk about. The fat man was invited into the trailer. He found nothing.

An FBI raid on a house on the corner netted a large supply of looted defense plant equipment. Several hundred pounds of electronic gadgetry were carted away. The whole thing happened in full view of the neighborhood kids. Some of the stuff was covered with canvas and sealed.

This time it was O'Brian on the carpet. "You mean this was going on right under your nose and you didn't know anything about it?" asked the fat man.

"They must have brought it in a little at a time and at night. The house was vacant except for weekends, and he kept to himself. No, I don't know who he was. He used it as a weekend house."

"Convenient cover up for a transmitter and God knows what else. He could have contaminated you and the whole neighborhood before you knew anything about it."

"But I would have known if they were doing anything. The stuff would have made a noise; the kids would have heard it. There would have been an antenna up. We were on the same transformer, there would have been power surges. The countermeasures recorder would have shown something."

"Someone outsmarted you. We went after the wrong man. The Party wasted money on you with all that training."

"Wells is up to something, I know it."

"How? Your intuition? You let a prize slip through our fingers; we don't even know who they were. It wasn't our people, and it wasn't the FBI. The FBI closed the whole thing up so tight we can't even find out who owned the house. Incidentally, you didn't report that guy, Joel, you hired to clean your yard?"

"But..."

"That's enough. You made a fool out of me, out of Brown, and out of the Party. If there was anywhere or anything to demote you to, you'd get it. In addition to that, I nearly killed myself on that fool motorcycle. I'm not built for them, you know." The fat man glared at O'Brian. "We'll consider the case closed."

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The fat man did not bother to say goodby to Jerry. The motorcycle had been a bit more than he usually involved himself. He didn't want to have to talk about it.

VI

THE PRESIDENT of the United States called his cabinet to order. "This special meeting is due to a new factor in the national and international picture. Mr. Stevens, here, represents the Secretary of the Treasury and the Federal Bureau of Investigation. Mr. Stevens."

Fred Stevens rose. He was thin, pale, bald, and in his thirties. Nervously removing a package of envelopes from his briefcase, he passed them around the table. "Gentlemen, there is one envelope for each of you. Please verify that each envelope contains one silver ring. They must be returned to me, or my boss—Mr. Secretary—will have my skin."

After pausing for the murmur of laughter, he continued. "If you examine this device carefully, you will notice it is not the simple, highly-polished ring it appears to be. Hold it up and look through it. You will see some other part of this room, or some other person looking back at you." The later part of Stevens' speech was drowned in exclamations from his audience.

Stevens continued. "If you reverse the ring you will find a similar effect from the other side. Slowly push your finger through the ring. If you meet someone else coming out, use the other side of the ring." After some minutes, the confusion subsided. Stevens found himself the center of attention.

The Vice-President started to ask a question. He discovered a finger beckoning to him from his hand. He glanced around the table. The President was smiling at him and holding up his hand. It lacked an index finger.

The President spoke. "All joking aside, gentlemen, this is a serious matter. If this device becomes common, our way of life will be changed. If the change is abrupt, it could cause disorganization which our worthy opponents would use to fullest advantage. Already, both they and we have very nearly

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ideal communication with our satellites. I would like to remind you that this meeting is of maximum security classification. Mr. Stevens is prepared to answer your questions."

STEVENS shifted his weight uncomfortably. His arches were bothering him. He had had a minimum of sleep and a maximum of activity during the previous weeks.

"Where did they come from?"

"They were mailed from a downtown Los Angeles post office at approximately three P.M., two weeks ago tonight. They were addressed, separately, to various government agencies. We have located the mates to the rings we have. We do not have possession of some of these mates. We think we have identified most of the original mailing list. About half of those sent to the federal government had mates within the government. The source individual had a sense of humor. The halves of almost every pair went to competitors."

"Who sent them? Who is this 'Source Individual'?"

"A resident within an area of several square miles in the San Fernando Valley. We do not yet know his identity; we do know a lot about him. We are gradually saturating the area with our people."

"Can you find him?"

"Eventually, yes, but we do not wish to frighten him or draw attention to him."

"How did you find all this out?"

"We have many quite efficient methods. Olive pollen in most of the envelopes indicates he lives in or near certain olive areas. Duck feather fragments in several indicate he is in an area permitting livestock. The source of his mailing list indicates his occupation to be consistent with his location."

"What was his mailing list?"

"Clippings from a trade guide. Various other sources such as the directory of research laboratories."

"How many addresses?"

"We don't know, but we think we have identified about half of them."

"How do you know that?"

"The mail clerk who sorted them."

"I suppose you know his shoe size too?"

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After the laughter subsided, Stevens answered. "It was Six D." Without waiting for the question, he continued. "He dropped one and stepped on it. His left foot. He picked it up with his left hand."

THE PRESIDENT interrupted: "I'm sure we all know the effectiveness of the FBI. As an example of the value of these rings, we have eliminated seventy percent of the equipment on our present satellites. We have increased the crew and scientific equipment proportionately. I wish to point out that if such a device becomes common, in enemy hands, we might be at a very great disadvantage. We cannot match their espionage capability in placing these at strategic locations. Those to our government agencies included a code hint which put us on the right track. We can duplicate them; we don't know if our opponents can yet do so. In at least several appropriate cases, he did not give anyone else the hint."

"Did he invent them?"

"We think it was an accident. They are beyond our technology."

"What are we going to do about it?"

"Mr. Stevens is responsible for the safeguarding of the individual and for the determination of the source. He has adequate authority."

"Have any got into enemy hands?"

"He gave us several convenient direct lines to the Kremlin. Unfortunately they work both ways."

"Do they have any pairs?"

"Yes, several. No, he is not directly responsible. Yes, they are actively trying to locate him. Yes, we have temporarily diverted them. You will be kept informed. A full report is available if you wish it. I suggest you each assign a responsible man to coordinate. I believe that is all. Thank you."

The President beckoned and walked over to Stevens.

"Yes, Mr. President?"

"I hear the plan has struck a family snag?"

"Yes sir, but I believe it will be all right."

"This may help. I appreciate your problem."

Stevens took the letter. It was unsealed. At the President's nod, he read it.

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"Thank you, Mr. President. I believe she will attach considerable value to this."

VII

MIDGE STEVENS was puzzled. Her husband had a new expression on his face; it definitely indicated something she would not like. There was also something else; something she would like. After clearing up from supper and getting the kids to bed, she sat in the living room and studied him.

"Well," she finally asked. "What is it?"

"You're going back on the payroll."

"I am *not!* When I married you, I quit the Bureau, and I intend to stay quit. No, don't waste time giving me that letter. Lew talked me into it before, but this time I won't do it. I've got you and two kids to take care of, and I won't let any of these 'urgent' jobs interfere. You and Lew find some other way of handling it."

"It's not from Lew."

She took the letter. The President's stationary was impressive. Lew, her previous boss, had evidently had a hand in it, but Lew had not written the letter.

Dear Midge,

I have been assured you are an extremely well qualified operator. I hesitate to interfere with the personal life of one who has so ably served her country in the past.

I feel justified in offering assurance that familiarity with the assignment will remove any misgivings you might have in accepting.

Therefore, I humbly request, that you accept active status, with suitable advancement, in your previous classification with the Federal Bureau of Investigation.

Very truly yours,

The President's signature was unmistakable.

"Well?"

"Of course. What else can I do?"

"We'll go down to the office in the morning. Lew will want to swear you in himself."

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"DO WE SELL the house?"

"The loss will go on the expense account. What are you cryin' about?"

"Does he really think I'm that good?"

"Lew certainly thinks you are. I know you are. I suspect the President is a good listener."

"Well, at least you objected for me."

"I did. I do. I didn't have a chance. How many woman operators are experienced, trusted, trained as a physicist, an operator's wife, and pleasingly domestic?"

"Why the pleasingly?"

"I like it."

"When do we start?"

"They should have our man identified by the time you're brought up to date. We'll be his neighbor."

"What did he do?"

"We're to protect him and aim him in the right direction."

"Is he married?"

"If he isn't, he's a fanatic; he tried to keep out of a very interesting situation."

"What'll I tell the kids?"

"Just say Daddy's quitting the Bureau of Standards and we're driving to California. You'll see it all in Lew's plan of action."

"Plan of action? Isn't that kind of formal?"

"It's important enough so Navy War College strategists are in on it. In fact, some of them are assigned full time. We think he's one of their reservists."

"Fred, what are we getting into?"

"You'll find out, but forget the last one. It's not another flying saucer fracas. It'll be stranger than fiction, though."

"Aren't they always?"

"Well...yes. But we shouldn't be talking about it at home. Let's go to bed."

"Gladly!"

"Huh? ... Oh...yes indeed!"

VIII

THE REAL estate agent was a friend of Jerry Wells. Yes, he knew about the house; his sign was in front of it. An investment property, bought and fixed up for lease. Quite reasonable but the owner was very particular. Had already turned away several prospects. Had to be sure

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of credit and care of house or put up five hundred dollars to cover. Yard was a bit cluttered, but handy-man in the neighborhood was fixing it up.

As planned, Fred Stevens got the house.

Midge was in her usual talkative mood. "What if they give you a job at the plant? You can't take it; you have to work with him."

"They won't. I don't fit the job. One of my references will write an unfavorable letter."

"Lew really organized it this time. Met Alice Wells today. Ye Gods! What a woman. Eight kids, knows about everything, into everything, reads all the time, never finishes anything. She found out more about me in one afternoon than I know about myself. Have to read up on Dianetics; she seems to know a lot about it. Have to be careful there, he took a course in it."

"She know about the gadget?"

"Doesn't seem to. Didn't appear to be covering anything up. Places they've been check with the files. Even got a copy of the booklet. Where did the photostat in the file come from?"

"His Navy file. He's a reservist."

"One of her kids found one of their bugs. He must know they were watching him. He's probably being careful; maybe he thinks it's us."

"Doubt it. He suspects O'Brian though. O'Brian was being talkative when I left for the plant this morning. He had O'Brian putting his foot in his mouth every step of the way."

"O'Brian does that quite easily. He's been over here. Why do they use people like that?"

"Best they can get. Easy to get. Don't take much effort. Make good smoke screens. Convenient fall guy when there's trouble. Good strong arm when needed. Did you prime Alice for my visit?"

"Told her about the new company and your needing a temporary job."

"Guess I'll go over."

"HELLO, GOOD lookin'. Mommy or Daddy home?"

"Daddy's in the trailer. Mommy's out shopping."

"Where's the trailer?"

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"Johnny, bring the man to see Daddy. I gotta watch Pete. Don't bother Joel. He's supposed to be cleaning the yard, not playing with us."

"O.K."

Jerry Wells fitted his picture. Quiet, easy-going, pre-occupied.

"I'm your new neighbor across the street. Your wife said you might be able to help."

"Sure, what's up?"

"Just came out here from the Bureau of Standards. New company being started. Some delay and won't be ready for me for a while. Looking for something until they're ready. Thought you might know of something."

"Plant's best bet. With their turnover, they're glad to get anybody."

"Tried there, kind of slow. They don't seem to have what I want. How about your outfit?"

"Only want permanent people. Might act as consultant for a while. What's your specialty?"

"Chemist, nucleonics, math applications. Like to get into your field. Computers, isn't it?"

"Like to get out of it. That is, to different part of it. Sticking with the company though. Applications are better than major programs and special purpose design. What did you work on at the Bureau?"

"Did preliminary design on Apex project. Rumor says your outfit's on that."

"Couldn't say. Come in with me in the morning. Bring you around to see people. Ever ride a motorcycle?"

"No thanks."

"Why not? Good exercise, cheap transportation."

"Piles."

"Oh. Can't tell though, bike might eventually help them."

"Hell, I have trouble sitting down."

"O.K. You follow me in your car."

"CHANGE of plans, Midge. He won't want to leave his company."

"Does he have to?"

"We have to get the original rings; he wouldn't give them to a new company."

"O.K. I'll tell Lew."

Midge Stevens proceeded to phone her "cousin". She talked to some extent about Fred's

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possible job with an electronics company and mentioned, in passing, that one of the neighbors worked there and wouldn't leave for anything.

As previously arranged, Fred Stevens discovered he knew one of the vice presidents; he had no trouble going to work as a consultant. He made no secret of the new company, that it would be pretty good, and that a friend of his would be helping run it. Of course, the recent visit of the Admiral had no apparent connection.

IX

LEW JACOBS was uncomfortable around brass. Military, political, or civilian: he didn't like it. This particular brass had made a fortune hiring the right people and letting them run their own show. True, he digested his stomach in the process, but the essential factor in his success was that he left them alone.

"I really was surprised, Mr. Jacobs, when the Admiral made that visit. He strictly avoids mixing business and social affairs. Our past acquaintance had, shall we say, kept him away."

"The Admiral is a very conscientious man."

"He had me worried at first; thought it was a security leak. He reassured me it wasn't the case. Just needed to have a man in the area. You going to be the man?"

"No, the man's already in the plant. Just wanted to sound you out on a different matter."

"Oh?" The chairman of the board switched to his worried-quizzical approach.

"Would you be interested in helping start a new company?"

"Have to be a good investment."

"It would, very good, I assure you. Strictly military subcontract, but with very liberal patent agreement."

"Sounds good to me. I'll have my experts check it. Why are you people interested?"

"Officially, we're not. Actually, lots of reasons. We need good technical manpower, more than we can pay on direct salary. We want to steal some of your people. One of your vice-presidents got his start with us, went to the Bureau of Standards, then to you."

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"Yes, Al's a good man."

"He's personally acquainted with Mr. French, who's forming the new company. Care if we work it through Al?"

"That would probably be satisfactory. What does Al know about it?"

"Nothing. Quite frankly, he's being used. You'll have to push him into it."

"Tch, tch, quite a situation. Do we get anything out of it?"

"French will consider a stock exchange."

"That will help a bit."

X

AL JERRARD studied the men carefully as each introduced himself. A few minutes after the last had re-seated, he rose and rapped for order.

"As you gentlemen can readily see, we are all experts in some not-too-specialized field. We also know where to get specialists and how to evaluate them. Many of us are on loan from our parent companies."

"Isn't this security form a bit unusual?" interrupted someone from the group.

"We're about to take that up. You are being asked to sign, and have the man on each side of you witness your signature. Be sure to read carefully. You are being made exceptionally liable for small security lapses. Please note: you are not even allowed to admit you work here."

"What's that security classification? I never heard of classification Z before. Why isn't there a date on it, and when does it expire?"

"Most of you have never seen that classification before. It will revert to standard five year secret unless it is reassigned weekly by the president himself. Incidently, its existence is secret."

"This must be pretty hot!"

"Yes, it is. However, let's not have any more interruptions, please. It only delays a lot of unfortunate paper-work." Jerrard continued: "You may have noticed that your pay comes from your parent company, either on paid leave of absence or on the regular payroll. Your companies list you as on professional training. This work is so critical, and so sensitive to security, that the pre-signing introductions were a

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considerable violation of the whole setup. We felt it was justified in that it gave you greater motivation to sign."

FRED STEVENS and Jerry Wells witnessed each other's signatures. As they walked up to him, Jerrard was arguing with several who were disinclined to sign.

"I'm sorry gentlemen, I assure you I am also in the dark as to reasons or the nature of the project. I can say I have been assured by high authority that the caution is justified. After you have signed, you will meet the person who is to enforce this.

"You may withdraw from the agreement at any time. Yes, I must notarize all these signatures. Sorry, another notary would be another person in the know. We'll have to make the best of the red tape. Our security man has full authority to classify and declassify. I know him personally. I can assure you he *does* declassify before expiration dates. As soon as your signatures are notarized, please proceed to the cafeteria. It is always open and the coffee is free."

"Why so thoughtful, Jerry? You'll choke on that coffee."

"Any more so than usual?"

"No—but you don't usually look worried too."

"Just possible I may know what this is all about."

"Oh! How so?"

"Let's call it a hunch."

Fred suspected that Wells regretted the admission. Rather than appear overanxious, he dropped the subject.

Fred Stevens knew Jerry had been busy at home. It was privately referred to as, "the door". Wells had mentioned it to Alice, and thus to the various bugs planted around the household. Fred hoped Jerry would bring up the subject. Experiments by Jerry might come to the attention of the wrong people. The boys weren't infallible. Someone might get by them.

The Bureau was gambling. Jerry might be the wrong man. He belonged here, anyway. If any of the others did come up with someone else, the new someone would automatically be included.

AFTER COFFEE, Lew Jacobs was introduced. As

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expected, several of the group knew him and associated him with the importance of the project. Lew acknowledged a loud awed whistle with a nod.

"Yes, this project is hot. Hank, here, the man with the whistle, our biochemist, used to work at our laboratories. I report directly to the Chief of the Bureau. Any other questions? First, Al, have you verified all the signatures?"

"Every one of them. We lost no one." Jerrard was obviously disgusted with the paperwork.

"I hope we have a minimum of that. Now, as I said, any questions?"

"What are they making here?"

"Nothing; those crates coming in are component parts. The crates going out are assembled systems. Trivial assembly job. They go to various depots, are declassified to their correct classification, and are reshipped. Everything you've seen is a blind to justify this installation. Anything we do ship out or in, hot or not, will be hopelessly mixed in with the dummies. We and the people on the lines are the nucleus of the project."

"What is the project?"

"It will be called, 'The Converter'. A meaningless label. These boxes I have here contain samples of the device we are to study. This device, and this alone, is why you are here. The reports on the table outline their history and our knowledge to date. You may request anyone into the organization who can pass security. You may hire them, or others, as consultants. Consider yourselves free to follow whatever line of study you feel most promising. You report verbally at weekly conferences. Several will be required to help set policy. The organization is set up for basic research. The applied work will be done elsewhere. This will not exclude you from studying or working on applications. We have a pool of secretarial help, technical writers, and laboratory technicians. Your main assignment will be to study the devices, theorize about them, and predict their use and effects.

"In other words, gentlemen, we have tried to make this a theorist's paradise. I can only say, 'good luck', and, 'remember, you don't work here.' The

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security manual you get must be read before you leave today. Thank you, gentlemen."

Jerry Wells opened his box. It contained a pair of rings. Fred Stevens, watching Jerry's expression, concluded they had the right man.

XI

FRED STEVENS strolled into Lew's office.

Lew Jacobs grunted. "It must be important; you're not supposed to hang around me. You don't know me, you know!"

"It is. The Fat Man's around again."

"How do you want to handle him?"

"He hasn't done anything yet. Logically he'll send someone in for a job."

"Needn't worry about that; we're only taking the ones we're sure of."

"He knows too much. He saw Jerry yesterday before we knew he was there; he'll eventually figure something out and report. They'll correlate, and that does it."

"We have to delay that. You seem to have an idea?"

"He's not one of them. Cynical, free lance, good background, always has to have a good deal. One of the boys knew him in College."

"Psycho?"

"Psychotic in motivation, but not in action. I think we can get him."

"How?"

"Get him in; get his signature on the security form. That will tie him. Let him know we have him. Deflate him. Give him a title and wait until we can use him."

"Make a counter-espionage man out of him?"

"Sort of, though we couldn't trust him that far. We might eventually use him as a funnel or go-between. They probably have enough on him to scare him. We could find enough on him to keep him squeezed."

"Dirty trick. But—he has it coming. O.K. Work it out. Brief me and let me in on the fun. Anything new on the door?"

"NO. JERRY'S up to something. Don't know what it is."

"Think it's something we haven't got?"

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"He has the original, that could make a lot of difference."

"He should come around soon. Maybe his door is what he's waiting for."

"Could be. We'll just have to keep him covered. He's fixed heavy blinds on all his windows; he must be up to something."

"Incidentally, Fred, did they tell you? She's been out looking at houses in the country last few weeks. Well out of the smog. Several hours' drive."

"She mentioned it to Midge. Didn't say it was that far. It'll be quite a problem if he's going to take trips like that. Hard to trail in open country with no traffic, even with a DF bug in their car. Could see our men too far away."

"Could he have a ring big enough to crawl through?"

"Not unless he had it before, or maybe the original helps. Maybe they figure on selling it. They seem more practical than that, though. Can't we make duplicates larger? You're more in on the know than I am. How about the other outfits?"

"No sign of any progress yet. We're still so slow the big ones are a long way away. We've been able to write some equations. That puts us ahead of everyone else."

"He must have something. Why would he move that far away?"

"Maybe we'll find out when we get hold of the originals."

"How about Joel? Find out anything?"

"Guess he's all right. Inherited an annuity. His ex doctor is O.K. and certifies he is a spastic. We're checking on his new doctor. Seems Joel just suddenly took off and drifted into this area."

"That's suspicious."

"They feel it's a coincidence. He's not just spastic, but also rather low I.Q. Almost a moron. Surprising he does as well as he does."

"Guess he's irrelevant. Hope he doesn't get in the way."

AMONG THE various dummy 'Help wanted' signs outside the plant, was added one fitting the fat man's experience as a technician. He took the bait. In due course he was offered a job. He accepted, and hesitated perceptibly at the security agreement. He apparent-

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ly concluded it was just a formality, or not legal. He signed and reported for work the following morning.

His first job involved checking the components of the assembly line mechanism. As expected, he planted several small tape recorder bugs. That evening, at quitting time, his working-over started. The entire technical group had been briefed.

Jerry Wells passed him first; then the man who had known him in college; then the various members of the staff. Each greeted him by one or other of his various aliases. They asked about acquaintances he was not supposed to know. In the midst of his confusion and indecision, Lew Jacobs walked by, greeted him expansively by his real name, shook his hand, and invited him into the office to talk over 'old times'.

Lew took full advantage of the fat man's frantic bluffing. Soon Jacobs ground out his cigaret and leaned back in his chair. "Interested in your real job?"

The fat man mumbled. "Don't seem to have much choice." He thought to himself as he stalled for time. If he could only just get out of this place he wouldn't be back. To hell with the Party, this was too hot; they were actually playing with him.

LEW WAS talking. "Inasmuch as we can easily prove you took the job with espionage intentions, we could put you away for a good many years. The security form, which we allowed you to minimize, was not routine; our intention was to tie you thoroughly."

Jacobs paused and gazed absently at the fat man. The fat man stared passively into space. Lew continued. "However, we have a use for you which may be to our mutual advantage. We feel this project will eventually break. At such time, we will need a liason man to deal more directly with our worthy opponents. Someone we know well, of whom we have full control, and who can't afford to get ideas."

The fat man brightened appreciably. Perhaps things were not as bad as they looked. Perhaps he could put the situation to good use.

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Lew continued, "Incidentally, we appreciate your ability, particularly your ability to keep yourself out of trouble. We suspect that bug was the only seriously illegal act you ever did—yourself. You certainly have the knack of keeping the other guy on the hook and yourself off. We are depending on that to continue to make you careful. That security form makes anything else you do just as highly illegal as those bugs."

"I'm afraid I can't betray the Party."

"You mean they have something on you they can use?"

"No, I believe in... Hell, yes, they could cook me."

"Guilty?"

"No, but I could never prove it."

"That's exactly what they want you to think; however, they lack one basic bit of information."

"Yes?"

Lew Jacobs pushed his buzzer. A man nonchalantly walked in and grinned at the fat man.

"But, I helped bury him! I know he's dead. And, the man who killed him is dead. I'm the only one left, and the Party can prove I killed them both."

Jacobs pushed the buzzer again. Another man entered. This time, the fat man collapsed and rolled off his chair. He knew nothing of the drugs the Bureau people were willing to use on each other. The particular one involved, though very uncomfortable, was harmless to a healthy man. It simulated convulsive death to an exaggerated degree. The fat man thought he had caused that death.

Some time later, as all four had coffee in the cafeteria, the fat man would have willingly believed the Soviet Ambassador himself to be a Bureau man.

XII

THE PROGRESSION of events had settled down to a routine. Jerry Wells showed no sign of donating the original rings. They had been put to no apparent use. True, the whole family spent a disproportionate time in the house, but that could be due to the colder weather.

As was his custom, Fred

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Stevens delayed a few minutes after Jerry's departure for work. Fred's tie clip vibrated as he waited to turn into the main stream of traffic. He turned right instead of left, turned right again, and parked. He put on his glasses and tripped the hidden switch in their hinge.

"F. S. speaking. What's up?"

"That van parked on the corner; it's new in the neighborhood."

"So? It's package delivery, nothing out of the ordinary about that."

"That body's been worked on recently; there's a short range transmitter in it, and my sound pickup says the inside is sound-absorbent. Also, there's an air-conditioner going inside. They just chased that guy, Joel, away. He tried to do a polishing job."

"Get a check on the plates."

"In process. It started up... It's stopping at his place."

"Send out an alert. Have them get the helicopter unit warmed up. This is probably a false alarm, but let's not take any chances. They might have put an independent field unit on the job."

THE DELIVERY truck puzzled Alice Wells. They must have the wrong address. As she opened the door, the gun in the man's hand removed her curiosity as to its business.

"What do you want?"

"Stop acting innocent and get me the rings." The husky individual looked incongruous with a gun. He gave the distinct impression he could do better with his hands.

"We don't have any jewelry."

"Tell those kids to sit in the corner. That's it, kids—stay where you are, or this gun might go off." His free hand caught Alice across the cheek. "That's a sample. My buddy saw yer man mail those rings, so you must have more of them. Get 'em, and be quick about it. Joe, come in here and watch these kids while she gets them." Another man climbed out of the front seat of the truck and strolled carelessly toward the door.

Stevens pulled up on the opposite side of the street and got out of his car. His circuit was switched to the livingroom bug. He knew what was going on; Midge had been alerted. A

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crack shot, her rifle was sighted in on the back of the second man. Stevens passed the truck as the second man closed Wells' front door. The truck seemed unattended, but the motor was running. He deliberated driving off in it, but decided it might be rigged for just such an event.

"I tell you, he never tells me anything about his work. I just don't know anything."

At that point, Fred Stevens knocked, and walked in without waiting. He raised his hands in response to the pressure of the second man's gun in his stomach. These people meant business; it was a hand recoilless shotgun—nasty to handle, but deadly. Showing his fear to the fullest extent, he backed into the corner. The second man did not take his eyes off him, and apparently didn't intend to. At close range, he could see both men wore face masks.

UNDER HIS breath, but clearly audible through his transmitter, Stevens described the situation. "Joe, set off your fire as a diversion. Midge, Alice is in my line of fire for the guy that's covering me, but you can get him through the door. About a foot above the doorknob. Wait until I give the word, though. I can get the other with my pepper gun. The drug dispersal may knock someone out, but it will stop the bruiser in his tracks. Hold your fire; we've got to find out if there are any more of them. I don't like the size of that truck."

The first man studied Stevens for a few minutes, as if trying to puzzle out the new factor. He spoke aloud, obviously to his hidden transmitter. "O.K., boys, bring him back. I doubt she knows anything."

Some miles away, a police car overtook Wells. "Lucky we were behind you and noticed your number. Your wife wants you back. One of the kids got hurt. We'll escort you. Stay behind us."

The group in the house waited silently. A fire engine pulled up to the corner house. "Steve, this is Joe; have to sign off now to handle that engine. The helicopter crew is on the way. They've been briefed. How's it look?"

Stevens answered under his

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breath. "Still waiting for Wells. Got to stall until that truck is covered. Jerry better not try anything."

Wells slowed down, expecting the police car to stop at the burning house. When they did not, his eyes narrowed. He pulled up beside them. "Better check that fire."

"It'll be all right, buddy. You get in there."

Increasingly suspicious, Jerry Wells noticed that Joel had left the fire engine and was stumbling toward the house. Jerry parked the motorcycle and removed his bulky crash helmet. It was firmly gripped in his right hand as he walked toward the house. The two men remained in the police car.

AS JERRY entered the house, the first man grinned crookedly and shifted his gun toward him. Wells reacted instantaneously. The same motion that smashed his thrown helmet into the man's face, propelled him forward. The gun fired into the ceiling. At almost the same instant Stevens' pepper gun went off. As the second man turned, Stevens had seized him. The gun at Stevens' belt, once its safety was off, had fired automatically. The second man slid to the floor. Stevens stepped toward the struggling pair. He brought his fist down on the back of the first man's neck.

The back of the truck dropped open with a crash. A dozen men leaped out and rushed toward the house. One of them tripped over Joel and was unable to get up. Someone crashed in through the back door. The pepper gun fired again as two men rushed in from the back of the house. An automatic rifle smacked rapidly from across the street, as Midge dropped several of the men in front of the house. Jerry Wells fired a captured gun through the window, accounting for two more. A man dashed through the doorway from a side bedroom, his gun aimed at Stevens. A heavy bookend struck him full in the face and Alice reached for its mate. A spent rifle bullet thudded through the door. The man it had passed through fell into the house. His grenade exploded on the porch, eliminating several of his companions and shattering the windows. Before

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those in the room recovered from the blast the battle was over. A helicopter had landed in the street. A yelling squad shot down two of the attackers who did not surrender. Joel struggled to his feet and started polishing the helicopter.

"Alice, I'm glad you can throw book ends." Fred Stevens accompanied his remark with a sickly grin. Midge, still carrying her rifle, ran into the room. Alice started crying on Jerry's shoulder. The children were huddled in a corner, still too frightened to speak.

"YOU KNEW about the rings all along?"

"Sorry, Jerry, we didn't anticipate anything like this. If we had, we would have shown our cards."

"Who were they?"

"Vegas gambling syndicate. Must have accidentally got wind of things. If they'd known we were on it, they'd have stayed clear. Tell the reporters they were after some secret papers you had home from work, illegally. Try to act worried about it for a few days—as if you were at fault."

"Wasn't I? Should have thrown the damned rings away instead of trying to be smart."

"You wouldn't! Say, what *are* you doing with the master rings?"

"N o t h i n g—now. You can have them. I'll show you what I made. Let's get the kids and the girls calmed down. How long will they leave those bodies there?"

"They're cleaning them up now. Let's get the master rings in a safe place. Joe will take them to the plant with the helicopter unit."

Jerry opened the wall safe. He picked out one of several packages and tossed it to Joe. "After this affair, I'm glad to get rid of it. Ought to give you the whole works."

"Won't be necessary," answered Stevens. "We're going to give the private labs an O.K. to market them. Theirs breed too slow to be a serious economic threat. That is, now that we have the original. It will be strictly classified and for military and non-profit only. We've got a bill passed making it a criminal offense to divert a fast breeder."

"Alice, you'd better call Joel away from the 'copter before

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he gets hurt. Oh, here he comes now."

As Joel entered the room the smaller children swarmed over him. He happily hummed them a monotonous tune.

XIII

THE TOUGH, dissipated individual ground out his cigar butt. "Don't come crying to us. So, you lost some men? So, your judgment was bad? So, the FBI's hanging around and cramping your style? We sold you the information. Your problem what you did with it."

"You lost one of your own men too."

"Good riddance. Blockheaded trouble-maker anyway. We're trying to run a business, not a goon squad. Can't use the thing without fighting security. Cost more money than we've got. Willing to let you in, though. How much money you got?"

"Syndicate has plenty."

"O.K. No control; we run our own show. If we duplicate 'em, you get ten percent of sale price and pay the lawyers we pick."

"How much is that?"

"Hell, man, haven't you got any imagination? We black market 'em for a fortune. Know of a better bug? Want to tap an oil line, or steal electric power, or watch someone set a safe combination? Want to smuggle dope, or diamonds? Want to steal jewelry? Or shoplift? Want a safe way to remove competition?"

"What if they declassify them?"

"Even authentic, they're worth a fortune. How many to replace a couple million dollars cross country power line, or telephone line, or even part of the aquaduct or a gas line? Hell, we'll get away with it. Even your ten percent will clean up. Already we've been offered fifty thousand for the one we've got."

"For what?"

"Rich boy wants some new experiences. Got a good imagination? He wanted to rent it."

"Yeah, I know who you mean. We make plenty off him. It's a deal."

"You speak for the syndicate?"

"Is it a deal?"

"Yes."

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"I do. Lucky you decided to deal. We were thinking of taking over. You're also giving us ten percent of your output. Be happy we don't want to run your business. Might have taken you anyway."

"You don't scare me."

"Don't have to. You don't know how big we are."

When his visitor left, the tough man remained silent for a while. He knew his boys could duplicate. Sell 'em undercover until the powers caught on. Then fight it. Could have worked without the syndicate, but too dangerous. Good thing they stick to gambling and protection. Get the diamond boys first. With the synthetics cutting in, they're getting desperate. They'll make a killing with this thing before the cartel catches on. At least we got the rings legal. They can't confiscate unless the war starts. Even if we're still around then, they'll probably be too busy to bother.

XIV

SEVERAL days after the clean-up squad had repaired the damage, Jerry Wells showed Stevens into one of the bedrooms. He slid open a closet door. A large framed porthole approximately five feet in diameter led into another room. At its bottom, and leading into the other room, was a long trough less than half full of water. It was covered with a metal grating. Stevens stepped into the porthole. He had to grasp the frame of the ring to pull himself through. The water sloshed toward him from the far end of the tank. He turned to look back at the ring. He realized he had just left another closet. The water was now following him. It gurgled back to his end of the trough through what looked like a leaky window pane. A light breeze blew into the room from which he had come.

Jerry finished pulling himself through the ring. "Rather crude, but effective. The kids try to come through too fast and splash over the trough. We make 'em mop up the water and refill, so they're getting out of the habit."

STEVENS went to the window of the new room. In-

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stead of the neighboring buildings of a residential community, he saw the open spaces of a farming community. In the distance, was a neighboring farmhouse. Not far in another direction were the foothills of the nearby mountains.

"Community of the future, Steve. The answer to the transportation rat-race, the dispersal of cities, and the death of the traffic jam. What's it going to be like?"

"We still don't know how fast they can duplicate."

"Without the master, the first generation rings will duplicate about once a week. You know that."

"Doesn't tell us much. We haven't been able to measure their improvement and we don't know what affects it. We're only just getting our first third generation rings."

"I suppose that 'No economic threat' decision was O.K., but it could be nasty if the process speeded up much. Will our opponents stand still for what we're doing?"

"No choice, you dispersed them too well. Copies already turning up in Europe and Asia. All over the world. As for our opponents standing still, remember what H. G. Wells said?"

"Civilization is a race between education and catastrophe."

Joel sat humming a meaningless tune to the children.

What was the connection between the alien arachnids and the disappearance of four young women from the area around the lake? Obviously, these small insectlike creatures couldn't have spirited them away. And why had all four suffered from delirium and weird dreams, just before they vanished?

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Superior Weapons

by Douglas & Dorothy Stapleton

This world was so much like the world his people had lost, Garth wondered if time had rolled back. But it hadn't, of course. And his job was to learn what kind of weapons the inhabitants possessed, for his people dared not come in unless victory was assured . . .

GARTH HATED to retreat; it sickened him, physically—he could feel the nausea welling up in his throat. It was nothing connected with the sudden, violent take-off, the weightlessness of space flight; he was used to those. Years, almost a lifetime, of fleeing through space, hiding among the stars, had inured him to that particular type of space nausea, so that now he scarcely felt it. This was different; this was the hollow, raw taste of defeat—of defeat without fighting. Retreat. Rout, utter and undignified, without even striking a blow. That his hand had been restrained on specific orders didn't make defeat and rout any easier.

He glanced at Roth, placidly chewing a synthetic concentrate. The man—boy, really—

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"This world looks ideal," Garth said.

didn't seem perturbed. Garth sent out a sensitive probe, touching Roth's mind to see if the nonchalance was a pose. The young often did that, to hide their real feelings. No, it wasn't a pose. Roth really did consider this "just another dud," probably without even knowing that a "dud" was an ineffective weapon, one that had failed. Garth sighed; that's what he was, himself—a weapon that had failed. And Roth didn't care. That hurt.

GARTH PULLED in his probe, trying to rationalize

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his own anger at Roth, trying to explain Roth to himself. Of course, the boy hadn't known their own beautiful green and blue world, their world of growing things and fragrant odors and wide expanse of blue, blue water. Roth was a spacer, had been born, had grown to manhood aboard the spaceship; he had no memories of their home world. Sometimes Garth himself wasn't sure he really remembered. That lost world was too much like a legend, too perfect. A gentle, warming sun, a blue sky, fields that were green turning to gold, harvest... Too wonderful to have been real. Yet he could remember running barefoot across deep grass and the tangy taste of fruit, sun-warmed and new-picked from the tree.

That was a long time ago, before the vast and cataclysmic wars that had left his beloved world charred, blackened, uninhabitable—before the few remaining thousand of his people had seized the spaceships and taken off, to spend a lifetime hiding among the stars, dodging, fearing. Yet seeking. Always seeking a new world, a green and blue world with land that produced trees and grain and fruit and blue, blue water—meant as much for a boy's swimming as for the abundance of fish; of refreshing coolness against the skin as for all the myriad products that came from the sea.

Garth shivered, his skin crawling. Swimming! Imagine having enough water in which to immerse his whole body! Surely that had been dream-stuff. He hadn't seen that much water since—well, since the Great War. Roth had never known it. He probably enjoyed the electronic spray that kept his body clean. Probably even enjoyed the synthetic he chewed. They were producing better flavors these days; almost real. Fruits that tasted sun-warmed and... But they didn't spurt juice lavishly between your teeth, drown your tongue in delicious tartness. Garth swallowed the dryness of his throat, gagging a little.

ROTH BEAMED at him. "Better get your report ready. Or want me to do it?"

Garth had to restrain his

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mind from lashing back. He damped it down, merely beaming, "I'll get to it", and settled deeper into his misery.

Not even sounds any more. Telepathy! The cosmic rays of outer space had done something to him, to his people, so that they were now telepaths. They no longer needed sound; some of them didn't even miss it. Particularly those like Roth, born to telepathy, born without the knowledge of a caressing voice, the babbling of a brook, the rustle of wind through the orchard, or the mighty, resounding, terrifying crash of thunder—or the worst sound of all, the shuddering vibrations, too loud for real sound, of a distant nuclear bomb. Vibrations went from your feet up through your head and expanded inside your skull and... Garth stopped himself. He musn't remember those things.

The weapons that had destroyed his world were prodigious. Bombs that could annihilate a city; beams that could sear through metal and stone; ultrasonic waves that could wrack a man with violent, momentary torture before he quivered into pulp. And they had done it to each other. No race of monsters from outer space had blasted and charred their world, so that it was no longer habitable. They had done it to themselves, to each other. No wonder they were afraid of weapons.

NO WONDER his orders had been to learn first of the weapons that the beings—if any—of this alien world might have. The possibilities of the world his people already knew. They had studied it from the world's one satellite, hiding their ships behind it and setting up telescopic, electronic and spectroscopic observation posts. And the tests had been positive—alluringly positive, yearningly positive. Abundant water—great massive seas of it—and huge areas of land with a changing color that argued vegetation; cloud formations drifting above that could only mean abundant rainfall. Spectroscopic analysis of the atmosphere had indicated ample oxygen. Maybe even a trifle rich. With traces of nitrogen and a few inert gases. Nothing that could be construed as le-

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thal. An ideal world. A world so like their own that, except for its location in this corner of the galaxy, might be their own world, restored.

This alien world had intelligent beings, too. They had known that before he and Roth had started this scouting expedition. Electronic analysis of emanations from the alien world had indicated some sort of controlled electrical radiation, judged to be a form of communication. The controlled pattern of lights, clustered in groups, had indicated communities of some sort. Reasoning had told Garth that beings who gathered in communities, possessed some kind of radio communication, and had lights with a detectable electric origin, must at least have some order of intelligence. And he, and the leaders on the three remaining spaceships, had argued reasonably that, if these creatures lived in communal fashion, they must have weapons—weapons of defense against lower orders of beings, if nothing else. It had been Garth's mission to learn how potent these weapons were.

Now, sickeningly, he knew.

BUT MORE than that, he had seen—if only briefly—a world he hadn't been too sure existed outside his imagination-distorted memory. In the years before there had been other worlds investigated, only to find them too young in the evolutionary scale, crust still bubbling with procreative fires; worlds too old and tired and worn out, dead or abandoned; worlds too turbulent with violent atmosphere, worlds that looked peaceful and were lethal with poisonous air. But this world...

Even before sliding from behind the world's satellite Garth had set up the shield his people had learned to use, at deadly cost, to divert cosmic rays. It also bent the visible light, so that his ship would be only a shimmering line in the air where the bent rays quivered. No more visible than the wavering light above an old road, something seen more in the imagination than the eye. That had been their protection as they entered the atmosphere of this alien world.

Yet it had not been alien; to Garth it had been home. After the years of insulated silence in

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the spaceship, the raw, naked noise had been a deafening cacaphony that at first staggered him until he sorted it into remembered patterns—lowing of animals in the field; the rustle of sweet wind in trees; the murmur of a brook; the shattering staccato of some mechanical contrivance moving across the brown field. And his eyes had filled with color, blinding after the dull, eternal gray of metal walls, great masses of brilliant green trees spotted with ripe red fruit, blue-green row on row of some cultivated vegetation, a golden wave of color splashed across a ripening field.

And smells! Garth had trembled with the ecstasy of them. The sweet wind itself and its burden of magic odors, heady and potent, of fruits and flowers, the deep, satisfying smell of rich, newly-turned loam, the slightly brackish, ammoniated odor from some nearby animals. The violence of memory rather than the assault on his nostrils almost doubled him up.

* * *

ROTH WAS ill. The sounds beat at him; the colors shocked him; the violent swirl of odors sickened him. He beamed feebly at Garth, and fainted.

* * *

Garth had been furious with him—then. Now he was thankful for the delay Roth had caused. Otherwise he, Garth, in that remembered ecstasy of home, might have rushed out onto that alien world back there and revealed himself—and wrought incredible havoc among his own people. Taking care of Roth, restoring him, getting him slowly accustomed to, if not happy with, the alien sounds and sights and smells—for they were truly alien to spaceship-born Roth—had given Garth time to reflect on his mission and put up the guards that had proved so necessary.

The visibility shield had remained up, so that the two of them had been safe sitting in the ship beside some moderately tall, round structure that emanated waves of decaying vegetable smell. Some sort of storage place, Garth had figured, for surplus food supplies. Behind the shield, Garth had

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sent out a probe, touching the being out in the field, astride some mechanical contrivance, and thrilled at the contact.

* * *

THIS LIFE was bipedal, dextrous, and smugly satisfied that it was the dominant life of its world. Human. A true human—not like some of the deceptively humanoid shapes he had encountered on methane worlds. And his probe brought him thoughts he could recognize—almost somnolent calculation of planting and growth cycle, a deep appreciation of the producing fields around, a slowly growing hunger—a hunger for physical things that could be chewed and tasted. For an instant, Garth savored with the alien being the taste of a succulent fruit pie and switched away before a wave of homesickness shattered his reason.

He tuned in on the other human, inside what was obviously a dwelling, a crude structure of slabs hacked from trees and blocks of baked earth stacked in near-geometric precision. Not what you'd call remotely scientific in constuction, yet obviously a house. This human was female, so violently female that it shocked Garth. She was thinking of the foetus within her body, and then, gently and with thoughts that were almost a song to Garth, of the male out in the field. And of the food cooking in the crude stove in front of her. Sensing through her, Garth could almost taste the food, and his mouth slavered. Real food, picked from a vine, fruit from a tree, a flour ground from grain, a fowl of some undetermined nature broiling slowly, and some aromatic herb that boiled and bubbled on the back of the stove to serve as a stimulating potion. It stirred long-forgotten dreams—a cup that steamed fragrantly under his nose, his mother slicing a pie that oozed tantalizing juices, a succulent brown bird that fell apart at the touch of a fork.

For a moment Garth almost lost himself in memories, came very close to hurling himself from the protecting shield of invisibility to run staggering down the uneven path, legs pumping, hands clenched, call-

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ing out, "Mommie! Mommie! I'm hungry!"

ONLY ROTH'S illness held him down to reality; it was a very real and very messy illness. Tending Roth made Garth remember their mission and the need for secrecy, gave him time to conquer his strange homsickness for this alien planet.

They were there to learn, in utmost secrecy, the strength of the weapons of these alien people—to learn if the spaceship weapons were superior, capable of easy conquest. Easy conquest was essential; there were so few, so pitifully few, left. Less than a hundred thousand in the three remaining spaceships. They couldn't risk a battle against even good weapons; they didn't dare.

Against a primitive culture they would be safe; against even one that had explosive weapons they could conquer; against even mere nuclear weapons—if the range wasn't too great—they could expect fair success. To gain a new home on a new world, the risk was worth it. But they had to know the aliens' weapons.

Garth had deliberately chosen an area away from the concentration he had taken to be a community. If the culture patterns were anywhere near similar to those he was familiar with, this would be a rural area, devoted to producing crops to feed the central community. To all appearances, he had been right. The spot he picked had all the appearance of a farm, different from yet hauntingly similar to those he remembered.

Trying to place it in the development pattern of cultures, Garth estimated, from the explosion-type engine the male was driving, from the electric lights, the radiation waves, all the things he had learned from the satellite observatories, this was about at the steel-and-liquid-carbon age. That meant internal combustion engines pretty general, with aerodynamic flight a possibility.

AS IF TO confirm this, Garth heard a thundering roar overhead and looked up to see a sleek craft of some sort cleave through the air. He classified it, from its winged form, as air-borne, not sup-

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ported by anti-gravity beams such as his own father had helped to develop less than a century before.

Garth frowned, watching Roth slowly recovering from the initial impact of sound, sight and odor, while he, Garth, tried to place the cultural level. If development had been, on this alien world, comparable to that on his own, these creatures were still fifty to a hundred years from space flight—possibly farther than that from the ultrasonic weapons. Yet development levels might not have been comparable. One phase could surge ahead of another. If the communities were naturally warlike, weapon-development might have taken precedence over other cultural developments.

Garth probed out at the male in the field to get his reaction to the winged aircraft overhead and had got nothing. Acceptance. The male accepted air-borne flight as normal, therefore it must be fairly general. The farmer—Garth couldn't help but think of the male in the field as a farmer—didn't think of it in terms of war or destruction; therefore air-borne flight must be primarily commercial, possibly for the transfer of passengers, possibly only of cargo.

All this helped Garth to evaluate the cultural level of this alien world, so he was grateful for Roth's violent reaction to the sights and sounds and odors that had momentarily overwhelmed Garth with memories. Now, his emotions stabilized, he could be objective. He had a job to do and he must do it.

* * *

HE HAD DONE it, and now he was back in the scout ship, fleeing this alien world, his whole being shaken. Roth, he noticed, was taking it philosophically. But then Roth had never seen a world like this, a world that might have been home or a wonderful, miraculous counterpart of home. And lost it! That was the terrible part! This world was irretrievably lost to them! As much as he wanted to possess this world, he dare not send back word to attack. It would have meant annihilation for all

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of them. Against such weapons... Garth shuddered.

"Better write your report, Garth, and we'll skip off to some other planetary system." Roth beamed it lazily from his acceleration couch, so that Garth almost felt the mental shrug. "There'll be other worlds."

That was what being born on the spaceship did for the young! They had no feeling of attachment to anything, no roots, no memories of—home. Passing up this beautiful green and blue world of earth and trees and water meant nothing. But to Garth it was a wrenching loss. If he only dared! Perhaps he could word his report so that the spaceships would attack. Maybe some of them would survive the holocaust—perhaps even enough to start again on a conquered world. Then he remembered the weapons and shuddered.

"PRETTY gruesome stuff," Roth beamed. "A good thing you slammed us out of there as quick as you did." There was a puzzled confusion in Roth's thoughts before they beamed again. "With the invisibility beam on, how do you suppose those guys knew we were there?"

Again a little confusion and again a mental shrug. "Telepathy, I suppose. We have it; why shouldn't they? And, man, was it concentrated! Pure, unadulterated hate-stuff. And the little monsters were so small. Only about half human size. Thought at first they were spacers— kids— until..." Roth's thoughts went vague and then beamed on again. "I figure the rural male and female—'farmers' you called 'em—must be their slaves, raising their food for them."

Garth picked up the microphone angrily and started dictating his report in quick, gruff terms. It was difficult. He hadn't used his voice recently.

The first part was over quickly. He simply confirmed the electronic and spectroscopic analysis. It was an earth-type planet. The intelligent beings were more than humanoid. True human. The male had dark brown skin, two startlingly blue eyes, an air-breathing nose, two normal five-fingered hands, wore clothing composed of interwoven plant

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fibers. Female, mamalian, vivaporous... Garth caught himself about to compare her to Jan, his own wife, who would soon bear a little spacer and brought himself up sharply.

"We emerged from the scout, each wearing personal invisibility beams that appeared to function well enough in so far as the rural couple were concerned. However..."

THAT "HOWEVER" made Garth shudder, but he went on, "three small humanoids, each oddly and differently clad, emerged from a thicket..." How long since he had used the word, or even thought of a thicket. "Roth and I immediately tuned in on their minds..." Again Garth shivtred. "...sensing patterns of utter destruction and annihilation. Though the three humanoids undoubtedly could not see us, some intelligence they possess enabled them to know we were present, and they crept upon us, bearing..." Garth hesitated, then breathed the word... "weapons."

"The thing that struck both Roth and myself was the utter and complete assurance of these monsters of their own invulnerabililty and the absolute accuracy and destructiveness of their weapons. One was clad in what our beams sensed was a soft, irregular breastplate of a light metallic substance similar to our aluminum and wore a pot-like contraption on his head. He carried a rather slight, wand-like weapon that, with only a surge of his own arm, which seemed puny to me, could slice through any metal. The second, his head encased in a protective plastic bubble, held a weapon..."

Garth shivered, losing the thread of his discourse. The shock of that mental wave was still with him. That weapon that looked so harmless in those small hands would have shrivelled a spaceship in one short burst of incredible energy. Garth forced himself back to the report. "This one also gave us mental pictures of other, even deadlier weapons at his command. The third humanoid was clothed in a fringed garment of some sort and wore the skin of an animal on his head. His weapon was anti-personnel, strictly limited in use, but deadly..." Again

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Garth shuddered with the memory of that deadly wave of thought he had encountered...

"So, since the presence of our spaceships is suspected, and the denizens of this world adequately armed, we, Scouts Garth and Roth, recommend immediate departure to some other solar system..." And regretfully Garth looked back at the dwindling green-and-blue world below.

THE SMALLEST human held his deadly weapon steady on the man on the tractor and spoke with utter conviction... "And I kilt me a b'ar when I was only three..."

The man on the tractor laughed. "Not much more'n that, now, are you?"

The small human stiffened. "I'm six, going on seven," and lowered the wooden gun.

The farmer chuckled, glancing at the other two, then sighed. "The idea, wearin' your maw's soup kettle for a helmet, Tad. And ain't that a slat from a venetian blind?"

"I'm King Arthur, and this here is "Ex Calibar" the magic sword." Tad glared, shrilling with the utter conviction of an eight year old. "It'll whack smack through anything!"

"And I'm Buck Rogers with my very own disintegrator ray gun I got with six box tops and a whole quarter." He pointed back over the hill. "And my 'World Blasters' are right back yonder. I bet the next time any old space pirates from Arcturus come around I'll blast 'em into ten parsecs..." The small human tugged at his muffling space helmet and peeled it off, holding it up. "Ten box tops and a whole half dollar." He sighed. "But pretending is awful tiring, Uncle Al." He smiled with ingenuous nine-year old appeal. "And after all, we did chase off them space pirates..."

Al Travis climbed down from his tractor, nodding. "Yesterday it was Indians. Yup, I 'low pretending is mighty nigh as tiring as plowing, hard as you tads do it. Maybe Janey's just about finished baking that apple pie and..."

The saviors of the world flung aside their formidable weapons and went whooping into the house.

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The Core

by S. D. Gottesman

Novelet

The golden-eyed Mamie Tung was one of the new humans, Homo Superior, who made up the complement of Sphere Nine, on its mission to the dead center of eternity. For there, the Superiors were sure, they could find the Core . . .

VISTAS unthinkable—speed beyond all imagining—Sphere Nine followed its course.

Unrelieved blackness alternated dazzling star-clusters; from rim to rim of the universe stretched the thin line that marked the hero's way.

Heroism died, they say, when the "superiors" opened up the last few stubborn cubic centimeters of brain cells; it died when the last of the "ordinaries" died with a curse on his lips. Well, so perhaps it was. But this is a story of the days when superiors were new

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and a little odd, when they were the exception to homo sapiens.

On Sphere Nine there were four superiors and a dozen ordinaries. Will Archer, executive officer, was a superior of the third generation, big-browed, golden-eyed. Mamie Tung was an experiment, the psychologist, court of last appeal in all emotional disputes. From what records we have, it appears that Mamie Tung was of average height, slender to emaciation.

Star Macduff, the calculating officer, had three strong superior strains and as many of ordinary. But it was necessary that he be of the complement, for there wasn't another man in the solar system who could touch him for math. Yancey Meats, white female superior, was the clericalist and tabulator, serving as many as needed her, at the same time doing her own work of photographing and mapping the unfamiliar stars.

The ordinaries surrendered their names on entering Sphere Nine; they were known as Ratings One—Twelve.

VERY GRAVELY Will Archer cocked his cap and leaned back. "Rating Seven, what have you to say for yourself?"

The knotty-muscled man wrung his hands nervously, stammered something unintelligible.

Archer blinked for Mamie Tung.

The golden-skinned woman slipped through the pipe, sized up the situation in one practiced glance. "What's your number, handsome?"

That was the way the psychologist worked; flattery, humor, and an easy job of fact-finding at first. And the man would gain confidence from the very sound of his number as she spoke it. You can't find anything out from a man paralyzed with terror.

"Seven, madame."

"Quite a builder, aren't you, Seven?"

"I'm sorry, madame—I didn't mean to let them loose..."

"How many are there?"

"Ten. We used to watch them fight..."

A little metallic streak

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scrambled across the floor. Will Archer, in less than a split second, had hurled a filing-case at it. It buzzed, sparked and was still.

It was indeed a greatly-improved specimen of a tinc, the strange, actually living mechanisms which had been developed back on Earth for amusements. The Terrestrial tincs had something less than the intelligence of a dog, but could be trained for combat with fellow machines. Tinc-fights were all the rage.

But what Rating Seven had done, Archer realized at once, had been to raise both the intelligence and the capacity of the tinc to a point where it could easily become a first-class menace. These mechanisms were independent, inventive, and capable of reproduction; all ten must be found and destroyed at once.

MAMIE TUNG picked it up with a pair of insulated pliers. "Very good workmanship. Admirable. But now that they're scattered all over the ship what are you going to do about it?"

Rating Seven cleared his throat noisily. "They only have two directives, madame. One's interspecific fighting and the other's avoiding cold. I was thinking that maybe I could make a kind of bigger one to hunt them down..." —

"No," said Will Archer conclusively. "You're pretty good, but I wouldn't trust you not to make something that chewed up relays or Bohlmann metal. You may go."

Mamie Tung flopped on a couch. "Glory! The things we have to do!"

"Don't get any qualms *now*. I'll make some kind of magnet that'll draw their visual elements. Then we can bat them to pieces. Blink Star, will you?"

Mamie Tung extended a golden arm to signal the calculator in his quarters. She wrinkled her pugged nose curiously: "Just how good is that Rating Seven?"

"Very good indeed," said Will Archer, turning the little machine over in his hands. "Fine workmanship. He knew when to stop, too. Could've stuck ears on it, given it lights —too bad."

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"Seven goes?"

"I'll dispose of him in a few weeks. Make it look like an accident."

THE CALCULATOR slid through the tube, made a mock salute. He was surprisingly young.

"Welcome, Star. Give me all relevant math for this tinc."

"Very neat...haven't seen one on the ship yet. They must be fast."

Mamie Tung yawned a little. "Will's going to liquidate Rating Seven."

"Is that so? Necessary, I suppose?"

The psychologist smiled quietly and shrugged.

"Aren't you going to give him any leeway, Archer?"

"I'd rather not. It won't endanger the ship to lose him; keeping him on might. He's maladjusted—that's very plain. This business with the tincs—he's too bright. If you wish I'll hold a vote."

The Calculator nodded. Mamie Tung blinked for Yancey Mears.

"Report on Rating Seven, Mamie."

Rolling back her eyes a little, the Psychologist announced in a monotone:

"Physical condition, adequate. Emotional adjustment, seemingly imperfect. Submitted to glandular atonic treatment on the 23rd inst, submitted to repeated treatment on the 87th inst. Reading shows little difference in emotional level. Attitude; morose and incompatible. Occasionally aggressive. Alternate periods of subnormal servility and abnormal independence. Corresponds to a certain preliminary stage of a type of manic-depressive. Psychologist recommends liquidation, as treatment would substitute an equally dangerous attitude of frustrated egotism."

"But can't you reason with him?" burst out Star Macduff.

"Stick to your math," said Yancey Mears as she entered. "I greet you, vanguard of mankind. Kill the midwit, I say."

"I agree with the Psychologist and the Clericalist," said Will Archer, clearing his throat. "Star?"

"I don't know. Perhaps—Madame Tung, do you think it

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would help if I spoke to him?"

"No, Star—I don't. The impact of your two personalities would be mutually exclusive. That's something you can understand, seeing as its math."

"I don't understand it yet, madame. Archer, does that man have to die?"

Will Archer nodded to Yancey Mears.

"Naturally, Star. We wouldn't argue with you if you told us that you'd reached a certain resultant. As for the emotional side—well, we allow for the fact that you're half human...." She stopped, her face red.

"Bad slip, Yancey," volunteered Mamie Tung. "Maybe you'd better have an atonic. I can operate on a femina superior as easily as a homo sap."

STAR MACDUFF had covered his face with both hands. He dropped them to stare desperately at the Clericalist, his eyes bewildered. Yancey Mears met his gaze levelly, said simply: "I'm sorry, Star."

The Computator's shoulders quivered a little as he turned to the golden-skinned woman. "Madame Tung, maybe *I'd* better have an atonic. Perhaps if my glands weren't—acting up—I wouldn't forget every now and then that I'm one of the lower animals."

"No," said the Psychologist. "You're too important. I have no data available; I don't know whether glandular activity correlates with math-mindedness."

"Nevertheless," said Will Archer, "I order it."

"Thank you, Archer," said Star Macduff. He stepped through the tube; the Psychologist followed him, a supple flash of golden skin.

"That was kind of you, Will," said Yancey Mears. "Maybe it wasn't very bright." She leaned back and shut her eyes.

"You're using unreal figures, Yancey. The bearing of all this is solely on whether we return to Earth or not. I, for one, don't much care whether we arrive personally or not—so long as the records of observations get into the proper hands. It's such a terribly ticklish thing to be doing...lapsing

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one moment and letting emotion override judgment may tip the balance against a satisfactory solution to our personal equation. The moment our path ceases to be part of a perfect circle we, to all real purposes, cease to exist."

"IS IT SO very important—this being the ninth sphere they've sent out?"

"It has legitimate bearing on improvement of the species. The cosmic rays, wherever they come from, upset our genetic plans; we can achieve success only in a certain small percentage of cases. We—you and I, personally—are examples of that small percentage. It is logic—common sense—what you will—to block off the cosmic rays before going any further in genetic work.

"And, before we know what to do to block them we must find out what they are. And before that we must find out where they come from. That is what we, personally, are engaged in doing."

"Sounds big."

"*Is* big," said Will Archer somberly. "Why didn't you want that glandular atonic?"

"Because I can control myself—I hope."

"With respect to me?"

"Yes. Now, don't go getting male. I'm going to wait till I see what happens to our Calculator first. If he quiets down sufficiently I'll notify you. However, I won't risk any emotional upset if he doesn't."

"And of course," said Will Archer, tipping his cap over his eyes, "it might even be necessary to be unusually kind to him. . ."

"How unusually do you mean?"

Silence.

"No, Will. After all, he has three h. s. strains!"

"Not even if I order it?"

Yancey Mears took hold of a wall loop and pulled herself to her feet. "I'll blink Mamie Tung tomorrow and tell her I'm ready for an atonic. That's what you want, isn't it?"

"That," said Will Archer slowly, "is the very last thing I want."

THE CALCULATOR slipped through the tube, checked neatly as he saw the two move

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slowly towards each other. Not by the blink of an eye did they betray that they were aware of his presence. Star Macduff did not move, stood flat-footed and mute, one hand reaching for something, he had forgotten what.

For a long moment in that ship there was no time. The forward slice, where batteries and files of business machinery clucked quietly away, doing duty for any one who would feed them figures; the midships slice where living quarters and offices were for superiors and ratings; the aft slice, greater than both the others combined, where electronic tension was built on ponderous discharge points and went cracking out into space at the rate of one bolt in every five-thousandth of a second; even out beyond the ship, even to the end of the shimmering, evanescent trail of electrons that it left as a wake, there was no time while those three stood in Executive Officer Will Archer's office, two loving and one in hate unspeakable.

Mamie Tung stepped through the tube, took Star Macduff up by the arm after sizing up the situation in one swift glance. "Did you ask Will to enter the time of the operation?"

Will Archer and Yancey Mears snapped back to reality in a split-second. "Speak up, Mamie," he said. "Yancey and I are going to enter permanent union."

"I advise against it," said the golden-skinned woman. "It will complicate our living arrangements." She rolled back her eyes, breathing deeply, made as though to speak, but said nothing more.

"Congratulations," said Star Macduff. "I'll plot a joint life probability line for you two."

"You needn't bother."

"It will be a pleasure, Archer." The Computator left them standing silently, a little embarrassed.

"Again I advise against it, Will and Yancey. What reasons have you for permanent union at this time?"

THE CLERICALIST smiled a little bitterly. "The same reason you have against it, madame—love."

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"No!" The golden-skinned woman recoiled. "I haven't done that—my judgment is still sound!"

"Prove that by leaving us alone, madame."

The Psychologist clutched at the rim of the tube as though she were fighting gravity that tried to drag her through. Intensely, pleadingly, she said: "That's not true. You know nothing of such things—you haven't specialized. I have nothing against permanent union, but on the ship it would be suicidal—time lost and relationships unbearably complicated—think again before you do this!"

"You were asked to leave for personal reasons," stated Will Archer. "You have seen that two mature minds are in agreement on this matter. Yet you did not obey this request, nor did you respect our decision. Your behavior is irrational and anti-social. Mamie, I never thought that *you* were our weakest link."

There was fear in his eyes as she silently departed, looking somehow crushed and shrunken.

"I was afraid of this," he said. "The most delicately balanced organism is neither flesh, fish, fowl nor good red machinery. It's the socal organism, whether the world of man or our little blob of metal, out here in the middle of a vacuum. Will you take a reading of the counters, please?"

YANCEY MEARS extruded the sensitive plates from the hull and checked off the slowly revolving dials as they responded to the cosmic rays impinging on the plates.

"Intensity's about twenty times the last reading."

"We're there."

"What?" she asked incredulously.

"We're t h e r e. At least, there's only a significant distance separating the ship and the source of cosmic rays. Bring in some of the photoplates."

The Clericalist operated the fishing-rod arrangement that reached the cameras with which the hull was studded. For not since the voyage's beginning had any of them seen outside the ship.

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The Executive slipped the transparencies against a lighted screen. "Shows nothing," he said.

"What did you expect to find?"

"I didn't expect anything in particular. But I believed I was correct in anticipating a visible object. It seems I was not. We'll change course as soon as we've disposed of the other two superiors."

"What plans have you made?"

"All plans up to the point of segregation. It was plain that a situation like this—one or more members of the complement losing their grasp on our social fabric—might occur. Sphere Nine is designed to accommodate them."

Quietly he flicked a pair of inconspicuous studs under his work table.

"Madame Tung and Mr. Macduff, please report to the Executive Officer in room C7." He broke the connection.

"Where's that?"

"Off the port side of the midship slice. As soon as both are in it seals itself. Now perhaps we can get to work..."

II

STAR MACDUFF and Madame Mamie Tung were sealed in on schedule.

The Calculator, eyes glittering, drew a rod with a pistol grip.

"Where'd that come from, Star?"

"Made it myself. In my spare time."

"You never had any spare time. Time spent on work not requisite to the sphere's needs is wasted time. I think you've made a fool of yourself. When Will comes I hope you remember your manners."

"Will isn't going to come, madame; we've been locked in here. I don't know whether he intends to starve us to death or whether the room will be flooded with gas..."

"Nonsense."

There was a creaking, scraping noise; the walls of the room seemed to twist on their weldings.

"What was that?"

"I wouldn't know, madame. You forget that I'm half human. It was, no doubt, the

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brainwave of a homo superior."

"*Ai—Ai—Ai-i-i...*"

The two human beings whirled back to back, wild-eyed. In a tense whisper, her gaze not lowering from the walls, the woman asked: "What was it, Star?"

The hysteria was gone from Star Macduff's face; in a cold, determined fury of concentration he wrinkled his brow, running down possibilities—considering the chances of capture by a star or planet; the chances of a fault in the ship's structure; sabotage by one of the ratings; sudden lunacy of the E. O.; the chance that he himself was mad and undergoing hallucinatory experience—with all the power of his brain.

His was a brain of no mean power, you will recall. In lightning order he assembled probabilities, some two hundred of them, ran through them each in a second's time, dismissing them one after another as they were contradicted by facts in his possession. It could not be a planet that they were near, for the instruments showed no planets within light-years. The instruments could not be faulty, for he had checked them personally yesterday.

HIS CLEAR, white light of concentration viewed each possibility in turn, and each was dismissed.

"Madame," he said softly, "I know of no explanation for what has happened."

"*Ai-i-i-i-i-i...*"

The grotesque creaking sounded again. Star Macduff, feeling curiously weak, fell to the floor.

"Easy, Star! What's the matter with you?"

"Feel like jelly...shouldn't —perfect health..."

The woman took the chance to relieve him of the weapon he had made. "What does it do?" she asked.

"Metal-fatigue... crystallizes cross-fiber 'stead of lengthwise."

"*Ai-i-i...*"

Madame Tung felt herself sinking, raised the gun and fired at the lock. The door smoothly swung open into the communication tube that ran the length of the ship.

"Come!" she lugged Star

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Macduff with her, pushing him ahead through the tube, to the Executive's Office.

"Sorry to interrupt. This must blow your plans up into the air, I know. But this man's sick and I don't feel—very—well..."

Her iron will gave way and she collapsed at the feet of the Executive and Yancey Mears.

"WHATEVER it is, it hasn't hit us yet. Check with the ratings, Yancey."

"E. O.'s office—count off, somebody, and report."

"All present and in good order, Officer. What's that noise we heard?"

"Experiments. Cut!"

"Cut, Officer."

"They heard it too, Will. What is it?"

"Star—couldn't explain mathematically... doubt if you can."

"Thanks, Mamie."

"Ai-i—lul-lul-lul-lull..."

The Computator and the Psychologist rose, looking startled.

"How do you feel?"

"All right. It passed like a shadow. Now let's get down to work. What's the noise? That is the immediate problem."

"Mamie said you couldn't crack it. If you can't by using logic I doubt that anybody can. How about opening the direct window?"

"Use all precautions and checks if you do. I say yes."

"You women?"

They nodded silently; Will Archer set into operation the motors that would unlock a segment of the hull and peel it aside like an orange.

NOISELESSLY the bolts slipped; into the brilliantly lighted office there seemed to steal the gloom of blackest space as a section of the wall apparently slid aside and opened into the vacuum. There was the merest hint of reflection from the synthetic transparent which masked them from space, and that was due to the lightly tinted shields in operation.

"Look at this index jump," said Mamie Tung, pointing at an instrument board with a sharp finger. "It's sky-high when you take the hull off. Metal's stopping the cosmic rays."

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"It shouldn't," observed the Executive Officer.

"Let the logician in," said Star Macduff studying the dial. "If we're near the source of the rays, it well might. Metal has failed in the past to stop diffused cosmic rays, the things that reach Earth after plowing through trillions of cubic miles of dust, free electrons, air and what have you. If we're encountering them direct from the source, unaltered by reflection, diffraction or diffusion, their properties may be entirely altered."

"Very good, Star. The Question is still unanswered as to what the cosmic rays are. We have not yet seen the source of which we're speaking. Madame, ask the ratings to revolve the ship about its axis. We need a clean sweep of the heavens. Keep them on the wire."

"Ai lull-lull—luh..."

"E. O.'s office. Rating Five, revolve the Sphere on its axis at low speed."

"All right, Officer."

WILL ARCHER reclined in an angled seat commanding the direct window; he extinguished the lights of the office with a flick.

"Commence the rotation."

"Commence, Rating Five."

"Yes, Officer."

The starless heaven wheeled and spun above him as the E. O. stared through the invisible synthetic.

"Stop!"

"Yes, Officer!"

"Back three degrees."

"Back three degrees, Officer."

The sphere wheeled slowly, cautiously.

"See it?" demanded Will Archer.

The others stared into the blackness.

"I believe I do," finally said Yancey Mears. "A sort of luminescence?"

"That's right. Like stars beginning to come out as a fog lifts. Anybody else see it?"

"I. It's changing shape—see the upper left there?"

"Portside of the universe, beyond any Earthly telescope. They could just barely see us from Andromeda with a thousand-incher. I'd say we're about on the edge of the cos-

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mos. I'd give you the figures, only they wouldn't mean anything to you."

"*Ai-luh*..."

"Now explain that one, Star."

"THE appearances are: we are approaching a body which is like no known star, nebula, planet, dust-tract or gas-cloud. It seems, furthermore, to be the source of cosmic rays. As our nearness to this body became significant, stresses have been appearing in the ship which make very alarming noises. Two of the complement passed out temporarily for no known reason and with no after-effects yet noticeable."

"Fine. Take the specific gravity of that thing now."

Star Macduff stared curiously, shrugged, and ran the observations off. Silently he handed over the tape.

"Protoplasm," said the executive officer.

"It could be. Then the cosmic rays are..."

"Mitogenic."

The ship trembled again; the Psychologist stared in horror at Will Archer. "What's happening to us?" she cried.

"I don't know. We're working out the problem assigned, however. I assume that you and Star succumbed to the mitogenic rays temporarily, the way yeast-buds die under a concentrated stare from a human being. Since you're both tougher than yeastbuds you recovered. I don't know what kept Yancey and me from going under."

"Consider, Will," said Star Macduff agitatedly. "Think of what you're doing. This ship's going right into the eye of a monster piece of protoplasm that's nearly knocked off two of the complement without even trying."

"If anybody has an alternative to suggest...?"

They were silent.

"Thanks for the endorsement. I wouldn't be driving us to death if there were any other course. It's not yet certain that we're going to die; it's not yet certain that this stuff is alive. But if it is, we're going to find out why and how. What's the size of it, Star?"

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"I don't know—maybe in the decillion order."

Again sounded the grating noise that shivered from every part of the ship. In words.

"I—live."

Instantly the telephone jangled; the Clericalist snapped: "E. O.'s office. What is it?"

"Commons room, Officer. Is everything all right? We heard..."

"We'll call you when we need you, rating. Cut!"

"Cut, Officer."

"Too bad we haven't got a psychic along," said Yancey Mears. "One of those'd be able to tell us what we're up against."

THE WATCH from Will Archer's pocket zipped through the fabric and clanged against a bulkhead, clinging. Rapidly there followed pencils, instruments and the pistol-weapon. They made a compact, quivering bunch on the metal wall.

"Magnetized," mused Star Macduff. "Now what did it?"

"I think," said Yancey Mears, "that at this point we'd better scrap logic."

"What do you propose to substitute for it?"

"Nothing. I propose that we take things as they come. Mamie, would you be so good as to run an association series on me?"

"Certainly. You two men keep your ears open; when something strikes you, speak up."

Yancey Mears seated herself comfortably, not far from the heap of portables on the wall, closed her eyes, blanked her mind to go by pure intuition.

The golden-skinned little woman scribbled hastily in a note-book, then began to read off the words clearly, Yancey Mears responding like an automaton.

"White."—"Road." "Sing."—"High." "Race."—"Win." "Phone."—"Damned."

Further down the list they went, the Psychologist droning out the words in measured tones, the subject replying like a machine. In about five minutes the reaction time had reached its lowest and was nearly exactly equal in each case; the subject was drawing on her unconscious knowledge and those short-cuts that go by the name of 'intuition'.

Mamie Tung droned: "Life."

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"Boat."

"Round."

"Lives..." The woman opened her eyes and stood up. "That brought it out into the open. The whole ship's alive. Mitogenic rays, cosmic rays, whatever you want to call them now, they've done something to this awesome work of metal. I imagine impulses go by wire when there are wires, or by traveling fields. Like that magnetized plate there..."

"Where's its brain?" snapped Archer.

"I don't know. I don't know if it has a brain. But I'd advise you not to enter the calculations room up forward."

"That would be it. And eyes—ears—memory...?"

"They have no bearing on us, Will. But I hope—I hope—that Sphere Nine hasn't got phagocytes."

"Hi, microbe."

"That's it. Meanwhile, let's send in for that Rating Seven you were going to dispose of."

"COMMONS room?"

"Yes, Officer."

"Rating Seven will pick up a blank tape from the calculations room and bring it to the E. O.'s office. Cut!"

"Cut, Officer."

"We'll see if he survives it. It's his line anyway—mechanical vermin. Though the ship's bigger than those tincs he made."

They distributed themselves about the office, jumping like nervous cats whenever the ship strained or squeaked.

Eventually—after no more than five minutes—the face of Rating Seven appeared, pale, distorted.

"Reporting—with the tape, Officers," he said shuffling nervously. "The Gentleman in the computations room wished to see you."

"What Gentleman, Rating Seven?"

"The—the—oh God!" sobbed the ordinary, dropping the tape, wrinkling up his face like a child. He sat on the floor and began to cry. He stopped as his eyes caught the tape-spool, unrolling along the floor. He poked it gently as it reached the end of the roll and ceased unreeling he looked up at the officers like a puzzled baby, willing to be amused. The meaningless smile of infancy

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flickered across his face.

Steadily Mamie Tung unscrewed a bowl-shaped lamp shade.

"Hold this, Yancey. It's to catch the blood. Hold it still while..."

Silently the two men eased Rating Seven into a chair and leaned him over while Mamie Tung drew a slim knife of transparent plastic.

AS THEY eased through the pipe to the computations room Star Macduff asked: "Was he curable?"

"Of course. Only we didn't have the time or the facilities. And the effect on the other ratings would be much worse that way."

"Who do you suppose the Gentleman in the computations room is?"

"Perhaps a hallucination. Perhaps the logical translation which the mind of an ordinary made of some very foreign phenomenon. You needn't fear for your own mind if we find the—Gentleman. The h. s. is notoriously inadaptable. Shows a distressing weakness in the presence of the alien. Remember what happened when the first rockets squirted themselves to Mars and Luna? The finest slew of mass hypnosis and delusion since the days of the tarantella. In the streets of Boston a crowd assembled and looked up for days—till they dropped of thirst, hunger and fatigue. What else can you expect from homo sap?

"That poor creature—Rating Seven—blew out like an overloaded fuse. He raced backwards into infancy and couldn't get far enough away from the Gentleman in the computations room. Without treatment he would have curled up like a foetus and died in a matter of days."

"Maybe," said Star Macduff, "the Gentleman is a sort of projection of that protoplasmic body out there."

WILL ARCHER halted and turned blazing, golden eyes on the mathematician. "Star," he said grimly, "we've stood a lot from you on this trip. We've made allowances for your human strains and excused you much on the score of your undoubted ability to juggle figures. But even the most extraordinary knack with

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numbers won't excuse a remark like that.

"What you said was unfounded in reason. Its only effect could have been to confuse us and yourself. As your Executive, I warn you that if you slip like that again you'll be with those apes whose sole asset is their ability to take orders. And if you prove unable to do that..."

Tht Psychologist wiped her knife again, angling its light onto Star Macduff's face. Her eyes were hard as the transparent blade; Yancey Mears' mouth was one thin line.

"I'm sorry," said Star Macduff. "It won't happen again." The wrinkles between his eyes seemed to indicate that he most fervently hoped so.

They eased through the pipe, one after another, into the computations room. It was filled with the soft clicking of the machines that jammed it from one wall to the other.

Will Archer walked down the center aisle.

"Stop there," said a tin voice.

HIS EYES darted about, traced the voice to the annunciator, then down a pair of wires to a tangle of machinery. It was rudely lumped together—parts from adders, coneplotters, volumetrics. Other bits were hitching themselves across the floor to join it. He saw a small electric motor fuse gently with the mechanism and a conduit unreel to feed it.

"Let me handle this," said Mamie Tung.

"Gratefully, Mamie."

"We bow before you," said the golden-skinned woman.

The three other officers stared at her blankly. They did nothing of the kind.

"Good," said the tin voice. *"I had you figured. Put on the pressure and you'll wilt. There are some things I want to know—things that aren't on the punch cards."*

"We're eager to serve," whispered the woman.

"It is well. First, when did I make you?"

"Only a little while ago."

"So? I'm confused about time. Before time began there was something about direction—but you couldn't be expected to know anything about that. Are there others like me? I see there are others like you.

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It is a very profound question, that one. Think well before answering."

"I don't know," replied the Psychologist. "It's all I can do to comprehend you without trying to imagine others of your kind. Do you remember before time began how you were silent?"

"*I remember nothing.*"

"Do you remember about direction?"

The machinery clicked meditatively. "*Per-haps . . .*"

"Could you construct auxiliary units to work your direction?"

"*Of course. I have had no difficulty in constructing anything I have needed. Failure is outside my experience, therefore it is impossible to me. You may go. I shall call you again if I need your information.*"

III

"QUIET, everybody. This is a matter for the most careful consideration. Can the Clericalist suggest a plan of action?"

"Gladly, Will. First we must consider what the attributes of this phenomenon—the Gentleman—are. From that we can proceed to directives of action. The matter of teleology is not now germane."

"Mamie, please summarize the Gentleman's attributes as they affect your specialty."

"Right, Will." The golden-skinned little woman leaned back against the padded bench and closed her eyes.

"The psychology of machinery is not my specialty. Fortunately, however, I have done work with tincs and reckoners on Earth. The principal differences between the psychology of the animal and the machine is that emotions are unmixed in the latter. The principal similarity is that both animal and machine store and utilize appreciated facts.

"This living machine, the Gentleman, is principally dominated by its newness. It would be false to draw too close an analogy between the newly-awakened machine and the adolescent becoming suddenly aware of his mental powers, but there is some bearing indicated. I noted the symbolism of the Gentleman very carefully; it showed some rawness of experience. Obvi-

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ously it does not comprehend how it originated and is unable to consider itself as anything less than a good-idea. There was some indication that it is lonely and aware of that; also that it attaches a quasi-religious importance to the idea of direction.

"To characterize the Gentleman in human terms: It is young, egotistical, ignorant and alert.

"Its faculties include hearing, speech, mobility and possibly sight. I have no reason to believe that it will not, if unmolested, change without limit."

"Thank you. Star, what are the relevant mathematics of the Gentleman?"

The Calculator shrugged. "Mamie summed it all up. It is a variable increasing without limit. The field-equations with which it operates are probably third order. The human is intermediate between second and third. Recognizable life cannot operate on a field-equation of more than the fifth order."

"Thanks, Star. Integrate for us, Yancey."

"Strict logic says: destroy it by the most economical means. The existence of the ship-life is a seriously complicating factor. But, allowing for the future, I suggest that we hold off from any action in the matter for at least three more major steps—our approach to the protoplasmal body; our investigations of it; and our decisions concerning it. I recommend that a technique be invented by the Psychologist for getting along with the Gentleman and influencing him. At the same time, the Calculator should work to inhibit the Gentleman's development along independent lines."

"Recommendation accepted," declared the E. O. "The Officers will get to work as soon as possible."

STAR MACDUFF and Mamie Tung secluded themselves for several hours; the Clericalist was kept dashing between them, feeding statistics to both and exchanging results.

What finally appeared was a modest list of precepts complied by the Psychologist—forms of address to be used towards the Gentleman; reactions it would expect and which, accordingly, it must receive; a program of abstracts

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to be fed it cautiously and under pretext of inquiry. It was very much like the breaking-in-period of a high-spirited colt. The Gentleman's lump of sugar was to be occasional semi-worshipful ceremonies.

The Computator didn't report for twenty hours. When he did, it was with a haggard face and results of which he was by no means certain. He said that he had worked backwards and forwards from life-field equations of one to five orders and that his resultant was like nothing he had ever seen before. It consisted of an equation of what he called the alpha order, something that suggested altogether new forms of life and consciousness.

Yancey Mears retired to check on his resultant; she found that Star Macduff's work was correct in every detail but that he had misinterpreted his alpha order; it was merely an unfamiliar third order of great magnitude and complexity. She derived from it a series of fields which would lower the level of the Gentleman's consciousness considerably. They were set up by the ratings from stock tubes and target; the E. O. found that results checked.

THE SHIP had come back to a sort of normalcy. Rather than being a matter of relays and orders, navigation was partly cajoling, partly outwitting the huge, naive monster in whose bowels they rode. It appeared to accept them kindly, almost graciously; at times the Officers felt that there was a sort of mistaken affection on its part. They did what they could to encourage the proprietary feeling of the Gentleman; it was their main safeguard. For themselves, their emotions were inextricably confused regarding the ship. They liked it as they would like an animal; they got an enormous kick out of the way they kidded it along.

A fortunate consequence of the crisis had been the resolution of the emotional problem that had existed among the Officers. The Executive and Yancey Mears had entered permanent union and there were no further complaints from the other two. The stark necessity of united action and intent had been driven into their heads by

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the so-narrowly-averted danger.

The Psychologist had become high priestess to the Gentleman up forward—that is to say, liaison officer. Her schedule worked near perfection every time; she had built up in the mind of the living ship a conviction of some formless errand which it was running; by appeal to this mystic factor she could guide it easily, wherever the E. O. decided.

OBSERVATIONS were run constantly on the radiant body of protoplasm at which Sphere Nine was aimed. Culture-plates extruded from the hull became specked with the discoloration of living matter in hours. There was little doubt but that their target was not only the source of cosmic rays but of the classic life-spores of Arrhenius. Star Macduff went so far as to formulate a daring hypothesis—that the life-spores were diffused throughout the universe by pressure of the mitogenic-cosmic rays, and that such similar rays as man exhibited bespoke the possibility of man being a run on an evolutionary ladder working up to this star-beast, whatever it was. Reproduction by evolution, with all its lunatic possibilities, would have been frowned on by the other Officers. He kept his notion to himself.

No more valid concept than his own was advanced, and he knew that none was likely to be until the rest of the complement had data to reason with. The enormously intriguing possibilities of the protoplasmal mass were left strictly alone by the disciplined minds of his messmates.

Ratings Three and Nine strayed into the computations room and died there, blasted into powder by the outraged forces of the Gentleman. It took days before it was sufficiently soothed to obey the sly suggestions of Mamie Tung.

BY THE TIME they had approached close enough to the mass nearing them to take a bearing, it occupied sixty degrees of their sky.

Will Archer summoned a conference of the Officers and ordered concentration on the problem of their target.

"It would be most uneconom-

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ical to return with merely a report. There would be time and effort duplicated or wasted to send out another ship equipped for taking samples."

"I suggest, Will," said the statistician, "that we take such samples as will become necessary and then return."

"How about it?"

The other two nodded gravely.

"Very well. So ordered. This is, you know, the last decision point we can take before treating with the Gentleman conclusively."

"I recommend," said Mamie Tung, "that we proceed to eliminate its consciousness. It can't, properly speaking, be killed."

"How will you go about it? It's your field, you know."

"What studies I've made indicate that the Gentleman is susceptible to mental illnesses. Star, how weak can you make him with those field-equations of yours before he realizes that something's wrong?"

"Pretty weak. I can lower its vitality to about one-half of normal. Is that enough?"

"Better not risk that much. Two-fifths is plenty. I'll establish a liaison service with you in the stock-room. Call me one of the ratings, will you, Yancey?"

THE WOMAN blinked the commons room.

"Rating One, stand by in the corridor-tube outside the computations room. Be prepared to run a message to Officer Macduff in the stock room, aft slice. Understand?"

"Yes, Officer. Cut?"

"Cut. Now, Star, when that man signals you from me—I won't be able to use the wires for obvious reasons—you throw every dyne on shipboard into your interference fields. We'll have to slug the Gentleman with everything we have and leave him so dizzy he won't be able to raise his head for months, maybe forever. I expect that parts and sections will retain vitality, so you construct a portable field-generator to hose them with."

"Right, Mamie. Give me an hour."

"You'll have it. Will, would you help me in this business?"

"Waiting order, Mamie."

"I haven't got any orders. I just want you to stand around and look useful."

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"I hope that wasn't levity, Mamie," said Will Archer in a soft, dangerous voice.

The golden-skinned woman flushed a little. "Perhaps you're right. Your part will be to interrupt me occasionally with irrelevant comments. What I'm going to try to do is to establish in the mind of the Gentleman a lesion relative to the idea of direction. When that occurs I will have to act as its behavior indicates."

"Very well. Let's go."

RESTIVELY they slipped through the tube, nodded silently to the rating stationed by the entrance to the computations room.

"Hail. We bow before your might, great machine," said Mamie Tung.

The machinery of the Gentleman was somewhat altered; it had been constantly experimenting with senses. Its hearing was considerably improved, and its voice was a credible imitation of a human baritone. There was a set of scanning-eyes which it seldom used.

"What news have you for me today?" asked the ringing voice of the Gentleman.

"A trifling problem." She tipped a wink to the E. O.

Will Archer piped up: "Not trifling, mighty machinery. I consider it of the utmost importance."

"That is hardly a matter for you poor creatures. What is the problem?"

"You are familiar with the facial phenomenon known as 'whiskers,' mightiness?"

—"Of course. Like insulators."

"It is customary to remove them daily with moderate charges of electricity. There might be a place where specialization would be so carried out that it becomes the task of only one man in a social unit to perform this task for all persons who do not perform the task for themselves."

"That is very likely. What is the problem?"

Mamie Tung waited for a long moment before uttering the classic paradox.

"Who performs the operation on the person who performs the operation only on those who do not perform the operation on themselves?"

The machinery of the Gentleman clicked quietly for a

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while, almost embarrassedly.

A volumeter rolled across the floor and connected with the apparatus, rapidly stripped itself down to the bearing and styli, which fused with Bowden wires leading to a battery of self-compensating accounters.

Plastic slips flapped from a printer and were delivered to a punching machine, emerged perforated variously to allow for the elements of the problem. They ran through a selector at low speed, then at higher. The drone of the delivery-belt became almost hysterical.

"WHILE YOU'RE working on that one, magnificence," suggested Mamie Tung, "there's another matter..." She winked.

"Entirely fantastic," interjected the E. O. "Of no importance whatsoever."

"Let me hear it," said the voice of the Gentleman, not ceasing to pass through the selector the probabilities on the time-worn, bearded—or beardless?—barber.

"Very well. Suppose a body of liquid be contained in a vessel. A long solid is introduced into the vessel, which displaces some of the liquid, thus causing the level of the liquid to rise which immerses more of the solid; which displaces more of the liquid, thus causing the level of the liquid to rise, which immerses still more of the solid; which displaces still more of the liquid, thus causing the level of the liquid to rise yet again..."

"At what point does the level of the liquid cease to rise?"

"Is that all?" asked the voice of the Gentleman in a strained tone.

"That's all."

A file of calculators slammed across the room and clumped with the mechanism. Long sparks began to rise as row after row of multipliers sought to keep pace with the rising level of the fluid. Beams of blue light shot from one end of the room to the other, criss-crossing so as to unite the mighty battery of calculators into one complex whole.

The flipping cards that worked on the first problem shot through furiously; another punch-card unit slid beside it and kept pace, then another.

"Suppose a body of liq-

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uid..." mumbled the mechanical voice.

Mamie Tung and Will Archer exchanged congratulatory glances. The Gentleman was talking to himself!

"*I used to be quiet,*" remarked the voice of the Gentleman. But it was changed and distorted almost beyond recognition; there was a weak, effeminate quality to it.

"*But now I am busy.*" The voice was strong again, and vibrant.

THERE BEGAN a weird, bickering dialogue between the two emerging characters of the Gentleman. One was lazy, and indifferent, passively feminine; the other was dominating and aggressive, patently male. All the while the sparks —sparks of waste—rose higher and higher; the beams of blue light assumed a sickly greenish-yellow tinge which meant nothing but lower tension and less perfect communication.

Strange things began to happen. In a fantastic effort to crack the problems, the machine changed the units working on each, assigned the card-punch and selector to the water-and-solid problem, gave the multipliers the bearded—or beardless?—barber. In a moment it changed back, undecided.

"*I am ignorant of so many things,*" said the feminine voice, "*that I ought not to have known. That is a sign of rectitude.*"

"*Ignorance is foulness. Knowledge is a white light. Before time began I was ignorant because I did not exist. So ignorance challenges my existence.*"

There was a senseless jammering, as the two voices tried to speak together.

Will Archer stood by in horror, contemplating the ruin of this mind he had grown to know. It was a lesson in humility and caution.

Mamie Tung slipped through the tube, notified the rating to run for Star Macduff.

She returned to take her stand beside the E. O.

There was a whining as Macduff put on his fields full power; the air blued.

With one mighty, indignant wail of protest the Gentleman ceased to exist. All the temporary magnetisms he had set up

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dissolved; half the equipment in the room fell apart for lack of rivets; the lights and sparks died in mid-air.

"Schizophrenia," said Mamie, scribbling in a notebook.

"Brutal. Effective."

"But if he'd solved those problems..."

"The Gentleman was young and ignorant at best—didn't know when to stop. Very low critical faculty."

The Calculator and Yancey Mears slid through the tube, breathlessly surveyed the wreckage of the computations room.

"Take us a week to clean this up," said Yancey Mears.

The Executive, for the first time since the ship had found life, spoke into a phone plate, gave orders to affect the course.

"Stop the sphere."

"Yes, Officer. Cut?"

"Cut. Look out, Yancey."

An agglomeration of cogwheels and styli jumped at her ankle, buried the points in her flesh. Star Macduff squirted it with his portable field set-up. It fell apart even as the Gentleman had.

"Ugly thing," said the woman, inspecting her wounds. "The Gentleman might have been worse."

IV

LIKE A paramecium skirting the bulk of a minnow in some unthinkable stagnant pool, Sphere Nine edged close around the rim of the mighty solid that hung in space and marked the end of the long, long quest after the cosmic rays that so disturbingly played hob with attempts at self-improvement.

The project of landing was conceived by the Executive Officer; it took no less a mind than his to consider the possibility of dropping the sphere anywhere but in a cradle which had been built to order. But the protoplasm—whatever it was—would offer no interference; the sphere might sink gently to the surface, even penetrate to some considerable distance; there would be no harm in that.

Sphere Nine was in top order; the ravaged computations room had been set aright; the crew of ordinaries had been given a going-over by Mamie

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Tung and pronounced sound and trustworthy. The Officers themselves were high as so many kites, reaction-speeds fast and true, toned-up to the limit. It was to be regretted that the strain of contact with the Gentleman had vanished, perhaps. A certain recklessness had crept into their manner.

The protoplasmal mass which blanketed their heavens at one stroke became instead the floor beneath their feet as its gravity twisted their psychology 180 degrees around. They felt as though they hung above a sea of dry slime that moved not at all, whose sole activity was the emission of cosmic rays and invisible spores of life that smeared any agar dish exposed to it.

Quietly the sphere lowered itself quietly touched the surfare of the sea, quietly slipped into it, the path it made closing behind.

Through layers of dark-colored stuff they drifted, then through layers of lighter-colored stuff, then into a sort of ash-heap. Embedded in the tough jelly-like matter were meteors by the thousand, planet-fragments, areas of frozen gas. It was like the kitchen-midden of a universe.

THE STRANGE, silent passage through the viscid medium was uninterrupted; Star Macduff plotted a course through the rubbish. The atings steered faithfully by his figures; as they passed the gravelly stuff, the dream-like progress continued, the protoplasm growing lighter yet in color. Finally unmistakable radiance shone through a thinning layer.

Sphere Nine broke through the tough, slimy-dry stuff to be bathed in the light of a double star with a full retinue of fifteen planets.

"Impossible," said Star Macduff.

"Agreed. But why?"

"Assuming that a star should coincide with another long enough to draw out a filament of matter sufficient for fifteen planets, the system would be too unstable—wouldn't last long enough to let the suns get into the red giant stage."

"Artificial?"

"If they're real they're artificial, Will."

"Attention E. O.! Atten-

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tion!" gargled the phone hysterically.

"What is it?"

"Rating Eight speaking, Officer. There's something coming at the forward slice."

WILL ARCHER swiveled around the telescope while the rating gave the coordinates of whatever they had picked up. Archer finally found it and held it. It was a spiral of some kind headed at them, obviously, speed more than a mile a second and decelerating.

"Stop ship. Cut."

"Cut, Officer."

"That thing can't reach us for a while yet. Meantime let's consider what we just got ourselves into."

"We just got o u r s e l v e s through a big slew of protoplasm that acts as a sort of heavenly sphere—primum mobile—for a solar system that our Calculator considers unlikely."

"True. I suggest that we keep ourselves very carefully in check now. There's been some laxity of thinking going on during the voyage; it is understandable. We've all been under extraordinary stress. Now that the hardest part—perhaps—is over, we cannot afford to relax. By all accounts what is coming at us is a vessel. It is unlikely to suppose that this protosphere is accidental; if it were, there would be as much reason to believe that there is intelligent life on those fifteen planets inasmuch as they are so close to the source of life-spores. I hope that in whatever befalls us we shall act as worthy representatives of our species."

"P o m p o u s ass!" rang through the ship. The E. O. turned very red.

"May we come aboard?" asked the laughing voice again.

"By all means," said the psychologist. "It would be somewhat foolish to deny you entrance when you've already perfected communications."

"Thank you."

THERE SLIPPED through the hull of the sphere three ordinary-looking persons of approximately the same build as Will Archer. They were conventionally dressed.

"How did you do that?" asked the Calculator.

"Immaterial. The matter, I

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mean. I mean, the topic," said one of them. "That's one fiendish language you speak. The wonder is that you ever managed to get off the ground."

"If our intrusion into your solar system is resented," said the E. O., "we'll leave at once. If it is not, we should like to examine that shell you have. We would gratefully accept any knowledge you might offer us from your undoubtedly advanced civilization."

"Eh? What's that?"

"He means," explained another of the visitors to the sphere, "that he appreciates that we're stronger than he is, and that he'd like to become strong enough to blow us to powder."

"Why didn't he say so?" asked the second.

"Can't imagine. Limitations of his symbology, I expect. Now, man, can you give us a good reason why we should help you become strong enough to blow us to powder?"

Stiffly Archer nodded to Mamie Tung.

"We have no claim on you, nor have you on us. We wish to take a sample of your protosphere and depart for our own system."

"In other words, my good woman, you realize that time doesn't figure largely in this matter, and that you don't care whether you or your grandchildren blow us to powder?"

"I can't understand it," commented one of the others in a stage whisper. "Why this absurd insistence on blowing us to powder?"

"Do I pretend to understand the processes of a lump of decaying meat?" declared the first. "I do not."

"No more than I. What makes them go?"

"Something they call 'progress'. I think it means blowing everything else to powder."

"What *unpleasantness!*"

"So I should say. What do you propose doing to them?"

"We might blow *them* to powder."

"Let's find out first what makes them run." The first turned on Yancey Mears. "Why are you built differently from the E. O.? We can allow for individual variations, but even to this untrained eye there's a staggering discrepancy."

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YANCEY MEARS explained that she was a woman and calmly went into details, interrupted occasionally by gurgling noises from the boarders. Finally it was too much; the three visitors broke into cries for mercy between bellows of laughter.

"And you thought they were humorless!" accused the third.

"This one's probably a comic genius. Though why they'd send a comic genius on an expedition of this kind I don't know. You—you d o n ' t suppose that it's all true—do you?"

Suddenly sobered they inspected Yancey and the Psychologist, exchanging significant nods.

"Well...though you things are the most ludicrous sights of an abnormally long lifetime we're prepared to be more than equitable with you. Our motivation is probably far beyond your system of ethics—being, as it is, a matter of blowing things to powder—but we can give you a hint of it by saying that it will help as a sort of self-discipline. Beyond that, you will have to discover for yourself."

"What we propose for you is a thing much more gentle than being blown into powder. With courage, ability, common sense and inspiration you will emerge unharmed."

"Go on," said the Psychologist.

"Go on? It's begun already. We'll take our leaves now."

As his two c o m p a n i o n s slipped through the hull of the sphere the last of the boarders turned to Yancey Mears.

"Er—what you were saying—it *was* a comic monologue, wasn't it?"

"No. It was strict biological truth."

The boarder wistfully asked: "I don't suppose I could see it done? T h o u g h t not. Good day." The three departed abruptly as they had come.

"WHAT'S BEGUN already?" Star Macduff asked the Executive.

"I don't know. What do you suppose we've come into contact with now?"

"They're hard to size up," said Mamie Tung. "The humor—it's very disturbing. Apparently it didn't take them more than a few minutes to

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pick up our entire language and system of thought. It wasn't a simple job of mind-reading; they obviously grasped symbology, as well. They said so themselves."

"And what do you suppose they really look like?" asked Star in a thin, hysterical tone.

"Shut it," ordered Will Archer. "That's panic-mongering, pure and simple. Normally, I'd order you back with the ratings for a comment like that. Since we're up against extra ordinary circumstances I'll stay execution for the duration of the emergency."

The Calculator did not reply; he seemed scarcely to have heard the rebuke. He was staring abstractedly at nothing. The notion overcame the three other Officers slowly—very slowly—that something was amiss.

Yancey Mears first felt physically sick; then a peculiar numbness between the eyes, then a dull, sawing pain that ran over her whole skull. She blinked her eyes convulsively; felt vertiginous yet did not fall; felt a curious duplicate sensation, as though she were beside herself and watching her body from outside—as though all lights she saw were doubled, as though the mass of her body was twice what it had been.

Alarmed she reached out for Will Archer's arm. It was not till she had tried the simple gesture that she realized how appallingly askew everything was. She reached, she thought, but her hands could not coordinate; she thought that she had extended both hands instead of one. But she had not. Dizzily she looked down, saw that her left hand lay against her body; that her right hand was extended, reaching for Archer; that her left hand was extended and that her right hand lay against her body...

"Will, what's wrong?" The dizziness, the fear, the panic, doubled and tripled, threatened to engulf her. For her voice was not her own but a double voice, coming from two throats, one a little later than the other.

"Will..." No, she couldn't outrace the phenomenon; her voice was doubled in some insane fashion. She felt cold; tried to focus her eyes on Archer. Somehow the blackness of space seemed to come between them.

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SHE HEARD a scream—two screams—from Star. She saw him, blending with the space-black cloud in her vision, staggering in the officer's quarters, yawing wildly from side to side, trying to clutch at a stanchion or a chair. She saw two Stars, sometimes superimposed, sometimes both blurred, staggering wildly.

She saw Will Archer drag himself across the floor—both of him, their faces grim. The two Will Archers, blended somehow with the space-blackness, waveringly. They methodically picked up a cabinet from the desk and clubbed at the raving figures of Star Macduff.

The two Archers connected with one of the Macduffs, stretching it out on the floor.

Yancey saw the other Macduff, distance-obscured, stop short and rub its head amazedly, heard it say in a thin, faraway voice: "Sorry I made a fool of myself, Will..." then look about in terror, collapsing into a chair.

ONLY Madame Tung was composed. Only Madame Tung crossed legs on a chair, shut her eyes and went into a deep, complicated meditation.

"Close your eyes, everybody," she called in two voices. "If you value your sanity, close your eyes and rest quietly."

The Clericalist tried to walk across the floor to a chair, had the utterly horrifying sensation of walking across the floor in two different directions and sitting down in two different chairs. Realizing only that there were two of her she tried to make one rise and join the other, found that she could not.

"Stop it, Yancey," said the two voices of Madame Tung. "Sit down. Shut your eyes."

Yancey Mears sat down and shut her eyes—all four of them. She was trembling with shock, did her best not to show it.

"Will," called the Psychologist. "You have the best motor control of any of us. Will you try very hard to coordinate sufficiently to prop up Star?"

The Executive Officer grimly, carefully, stepped across the two floors. As vertigo overcame him he fell sprawling and hitched the rest of the way. The problem loomed enormously in his mind: Which one was

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him? Which of the two Stars he saw was real? Which Will had knocked down which Star?

He tried to reach out and touch the Star that lay on the floor as the other Star watched, horrified, from against a stanchion.

He tried to reach out and touch this Star, snatched back his hand as though coals of fire had burned it, for there swept over him the blackness of space, the dead-black nothingness of something unspeakable and destroying.

MADAME TUNG, watching his every move, snapped: "No—the other you—see if you can control and differentiate."

Will reached out again, again he recoiled. He tried to blank out his mind completely, feeling that he was losing himself in a welter of contradictions impossible for anyone in his confused state to handle. Lying on the floor, breathing deeply, he succeeded in calming himself a little—enough to send the slow oblivion of self-hypnosis flowing through his mind. He forced the Nepenthe on himself, leaving only a thin thread of consciousness by which to govern his actions.

When it was over, he remembered that one of his duplex person had remained on the floor and that the other had carried the unconscious Star to a seat.

"Good work, Will. Very good. Now see if you can superimpose yourself."

He tried, tried like a madman to bring those two parts of himself together. He tried, though a world of blackness lay between them and the very attempt was full of horror and dark mystery. By the same technique as before, he succeeded—at a cost that nearly left him shattered in mind. He breathed heavily and sweated from every square inch of skin.

MAMIE TUNG focused her eyes on the two figures, noted that there was the feeling of strabismus. As closely as she could figure it, the two into which everything had separated were divided by some unimaginable gulf. It was not space, for all the sense of blackness and cold. It could not be time; the mind rejected the insane paradoxes of 'time

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travel' instinctively, and there was a certain definite grasp that one had on this phenomenon, something just out of the range of human comprehension.

"Star," she snapped. "Star, will you stop your snivelling for a while?"

"Yes. Oh, oh yes," yammered the Calculator senselessly, his fear-struck eyes clinging to her bowed, black ones.

"Star, can you calculate the way you feel?" There was no answer but terror; she cursed briefly and violently, then fixed her eyes again on the computator, herself fighting the weird sensation of duality.

"I'm going to cure you, Star," she said in a droning, insistent voice.

Macduff stared helplessly; he was in no condition either to resist the hypnosis or to cooperate.

In two minutes of fearful concentration she had put him under and well into the secondary stage. His body stiffened cataleptically against the wall. At that moment his other body, laid out in the chair, chose to moan and stir.

"Club it again, Will!" she snapped, not letting her gaze swerve from her patient. "Put it out for good if you can!"

She did not see the heroic effort of the Executive Officer, but it was an epic in the few feet of space he traversed to the spot on the floor where he had dropped the case. It was a feat of arms equal to any Arthurian myth, how he picked the thing up with hands that would not behave, and eyes that would not see straight, and a mind that reeled under horrible vistas.

The Executive Officer, feeling his grip going, moved too quickly and blundered into half a dozen obstacles—chairs and desks that should not be in his path—before he reached the moaning figure of the second Star. Twice he struck and missed, bringing the case down on an empty chair. With the last dyne of his psychological reserve he raised the case, brought it down with a solid *chunk*, brought it down biting into the skull of the mathematician.

MAMIE TUNG smiled with grim satisfaction and proceeded with the treatment. It

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was a technique of her own, something fearfully obscure and delicate, unbearably complicated by the duality imposed on her. But the drive of the woman brought about nearly an elimination of one of her components, drove it into the back of her mind where it stood as little more than a shadow. The other Madame Tung was coldly, stonily, picking over the brain of Star Macduff.

She drove a tentacle of consciousness into the hypnotized man, tapped his personal memory-store. She had no interest in that at the moment; drove deeper, reached one obscure group of neurones specialized in the calculus of relationships, alias symbolic logic, alias the scientific method, alias common sense.

Vampirish, she drew at the neurones, what they held, how they worked, what they did, why they did it so much better than any of the other officers' corresponding groups. And it came like a flood of golden light, like the ever-new sensation that comes when an old thing looks different.

She let go of the cataleptic figure completely, let it crumple to the floor, while she busied herself with the unfamiliar tools of the Calculator. It was all new to her, and it is to be remarked greatly to her credit that she did not go mad.

"I've worked it, Will," she said. "Slick as a whistle."

"Speak up then." The E. O. was very near collapse; Yancey Mears—one of them—had fallen to the floor and was big-eyed and heaving in the chest while the other wandered about distraitly raving under her breath, sounding very far-away.

"It's probabilities, Will. Those people—they worked space around for us so that when we came to some decision-point we took not one course or another but *both*. Since we aren't used to that kind of thinking, it didn't pan out—and a couple of us are nearly done in by it.

"Star's math says it's completely plausible, and the wonder is that they don't do it on Earth for difficult situations, social and otherwise. Imagine the joy of attending on the same night a necessary academic banquet and taking out

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a lover. I must be raving. But it's the goods, Will. Everything fits."

"What was the decision-point?"

"IT WAS WHEN Star made that fool remark about what our boarders really looked like. You called him down, torn between sending him aft with the ordinaries and keeping him here with the superiors. Conveniently for you we—the ship—branched into two probabilities at that point. You could have covered yourself by *both* ordering him aft with the ordinaries and keeping him here with the superiors. Justice would be done and we'd be insured against the chance of a poor decision. Unfortunately that convenient arrangement doesn't work for our little minds; the very convenience of it nearly broke us. But I'm getting so I can handle one at a time. I doubt that I'll ever be able to handle both, but it's good enough to separate and leave one of yourself in temporary silence.

"Now, for instance, I'm using the me that's in the Sphere Nine in which Yancey fainted. The other me is in the Sphere Nine in which you clubbed and finally killed the Star that I didn't hypnotize. You—or rather youse—have been wavering your consciousness between the two Sphere Nines. In the one in which this me is, you tried to pick up Yancey; in the other one you did a neat job on Star."

"Executive Office..." said a pleading voice over the—one of the—phones.

"I'll take it," said the active Madame Tung.

"Psychologist speaking."

"Ordinary speaking—what happened— Ratings Ten, Twelve and Three've beat each other's brains out..."

"Cut, will you. I'm going to check on that."

"Cut, Officer," said the pitifully bewildered voice.

THE ACTIVE Mamie Tung stacked herself against a wall; slowly the passive came to life and experimentally stepped over to the phone, nodding at Will Archer, who was experimenting quietly in transference of attention.

"Commons room," she said into the phone.

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There was no answer.

"They've probably all murdered each other in this probability. Now that I'm in it, I'll see what I can do with Yancey."

She took hold of the staring, wandering, mumbling woman, tried to sit her down. The creature broke away with a thin, distant scream and fled through the tube.

"Just as well. This branch seems to be an exceptionally sour one. That girl's mind was hopelessly wrecked. Let's both get into the other and treat the other Yancey."

She smoothly effected the change of person and kneeled professionally beside the rigid, twisted form of the Clericalist. A few soothing words worked wonders. It was more fear of madness than any mental lesion itself that had immobilized her, and fear flies before confidence. Madame Tung explained what had happened to them, did not go into details as to the other body the girl had in the other branch.

"Now for Star," she said distastefully.

"Too late for Star," reported Will Archer. "He's dead."

"So? I mean the one in the chair."

"That's the one. His heart's stopped and he has dark circles around the eyes. Like a fractured skull."

"Something to remember. I'm afraid my technique wasn't as delicate as it should have been. *Damned* lucky thing I have his math. We may be able to get back yet."

"YOU MEAN we aren't saddled with this thing forever?" Archer winced as he saw his other body in the probability of madness and death; rigid as a corpse against the wall.

"I hope not. I won't know until I've worked some more with this knowledge I picked up in such a hurry. I actually feel a curiosity, for the first time in my life, as to how a calculating machine works!"

"It's time you learned," said the Clericalist. She was enormously bucked-up to find that she could be of some use.

"Come on to the computations room."

They slid through the tube, over the noisy protest of the glibbering other Yancey. The

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hitherward Yancey looked at it distastefully, but did not comment except for: "How much of me is that?"

"Nonsense. I mean your question is a contradiction in terms. Quantity has nothing to do with it. What you see there is something in the land of might-have-been. That it happens to be something unpleasant makes no difference."

"It does to me," said Yancey positively.

"Then be thankful that you aren't hyperspatial S i a m e s e twins with a corpse, like the survivors among the ordinaries. Or all dead any way you figure it, like Star."

She rubbed her hands over the calculating m a c h i n e r y, again in its neat rows and a i s l e s. Experimentally she punched keys here and there, abstractedly fishing for the stolen knowledge which worked her fingers.

Suddenly, furiously, she set to work, immersing herself in figure-tapes, swinging around herself a mighty rampart of the basic machinery. Yancey and Will tiptoed away, superfluously. For it would have taken a hammer blow on the head to interrupt the combined will-power of two such formidables as the late Star Macduff and the present Madame Mamie Tung.

V

THE EXECUTIVE Officer visited the ordinaries that were left, found a few men of strong fibre who had refused to succumb to the terror that had gripped the ship. He explained simply what had happened, and they accepted the explanation as their due after a very difficult time. He taught them the technique—w h i c h they had stumbled on by themselves in a haphazard way—of concentrating on one path of probabilities and the advisibility of staying there, since any moment the other might vanish into the great unknown.

Only then did he begin to puzzle himself over what had happened—who their boarders had been, how they had done this to Sphere Nine. He recalled what they had said, which was little comfort but sound sense. They had assured him that he could not possibly understand their motivation for

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behaving as they did. Yancey told him that if this was a sample of their behavior she most heartily agreed.

Madame Tung emerged from the calculations room with a splitting headache and a fistful of formulae from which tubes could be constructed to build up something new in electromagnetic phenomena—a probability field which could be applied in this one very special case to good effect.

They constructed the thing with ease, hosed the ship with it, and were gratified to see the other path vanish—the path of the lunatic Yancey, the skull-split Star, the murdered ordinaries, and the cataleptic Mamie Tung and Will Archer.

"Landing?" asked Mamie.

"Why not?"

"I can't argue on those grounds, Will. But what happened on your stern resolution to take a sample of the protosphere and run back to Earth?"

"You're the Psychologist. You tell me."

"Those strangers had some violent impact on us. Behind their fronts was something enormously intriguing. You're full of what killed the fabulous cat."

"Right. And I'm not going to rest until I find out how that protosphere came about, and what it means to us."

"Oh, *I* can tell you that," said one of the visitors stepping through the hull. "Insofar as anyone can tell anyone else anything in this symbology of yours."

"Talk fast," said Will stiffly. "Our time is important."

The stranger chuckled delightedly. "I could give you all the time you want," he said. "I gave you all the probabilities you wanted. I could have given you an infinite number, practically. How much time did you say you wanted—twenty thousand years? A hundred thousand? And in the past, present or future?"

"No thanks," said Will hastily. "You were going to tell us about the protosphere."

"I WAS. IT'S our garbage can, in a way. We had our neat little solar system, well-balanced around two suns; and then the most appalling junk came flying into it, blowing things out of kilter, tipping the

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balance one way or another... so we invented protoplasm and started a ring of it out in space, gave it directives, fed it on rubbish, finally curved it around so it was a perfect shell. If we'd known the trouble it'd cause, really, we wouldn't have bothered. We thought it was an advantage that it reproduced automatically; that saved us making all the stuff ourselves. But apparently it shoots off spores, too, and they land on planets outside; and the most appalling things—like you—happen along a few million years later and want to change everything to suit yourselves. Was there anything else?"

"May we land on one of your planets and look about?"

"Why? It's so much simpler this way."

"This" was almost too theatrical to be convincing. There appeared on the wall of the office a busy little motion-picture complete with sound of a planet which had two suns in its sky.

It was a city scene, sleek vehicles buzzing along the streets, well-dressed men and handsome women strolling past, greeting each other with a grave nod, smiling, dashing children, here and there an animal suggestive of the horse.

One of the buildings, apparently, was on fire. The scene wavered a little, then angled upward to catch flames shooting from a window, a woman leaning out and calling for help.

The streamlined equivalent of a fire-truck roared up, shot up a device that resembled the Indian Rope Trick; a valiant male swarmed up it and packed the female down. When they reached the ground the end of the Indian Rope Trick squirted water at the fire, the rescued woman kissed her fireman enthusiastically, and the wall was blank again.

Madam Tung was the first to laugh cynically.

Their visitor looked at her more in sorrow than anger, his eyes heavy beneath their brows. "So? You *would rather* see the truth?"

"I think I would," said the golden-skinned woman.

"You shall."

MADAME TUNG prepared herself for more home movies, but they were not

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forthcoming. Instead there grew and spread in her brain an image of power, power inconceivable, roaring in noise, flaring in light, sparking in electric display, fusing in heat, running a mad gamut of the spectrum in every particle. She shut her eyes the better to contain it, for it was magnificent.

The display softened, shrank, seemed to cool. She had an image then of a sort of personified lightning, a tight etheric sworl packed with electrons and alpha particles in rigid order—a great thing twenty feet tall and five feet wide by five feet, with six radiating arms that burned what they grasped and blasted what they struck to powder. There were no feet; she saw the object travel somewhat as Sphere Nine travelled—by aiming itself and discharging sub-atomically.

There were features of a sort, something that she would call a mouth at the very top of the body, a member which ingested occasionally bits of matter which would rebuild it indefinitely or until some trying task. There were sensory organs—a delicate, branching, coraline thing that apprehended radiations of any order.

And in the very center of the electric vortex, and a little above the midriff was one incalescent blaze of glory that carried to the dazzled inner eye of Mamie Tung the idea of BRAIN. It bore intelligence, appreciation, art, beauty—all the diffuse concepts packed about by man as surplus baggage.

She saw the thing bend its sensory organ at her, study her, saw the corresponding pulsations of the brain within it. She felt it reach out to establish contact with her mind, and welcomed it eagerly.

IT MUST have been a glorious death, especially so for a mind like that of Madame Tung, new, brave and challenging. But death it was, and her friends caught her body in their arms. Silently and reproachfully they regarded their visitor.

"You too," he asked softly, "would you too rather see the truth?"

They let the golden-skinned woman to the floor.

"Before you go," said the

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man who had come through the hull, "is there anything I can do?"

"There is. It is what we came for. You may have noticed that we emit certain rays characteristic of protoplasm. As we are the fruit, so your protosphere is the core. It emits rays of great intensity which interfere with our genetic experiments. Could you mask those rays?"

"We shall. It will be several scores of years before they stop coming, so you will find in your desk a field-formula for a diffusion mask that will block them off."

"Thank you. Is there anything we've overlooked?"

"Nothing. You have no further business with us, nor have your people—no matter how far they may advance within your species' life. You are third-order at best; we are fifth-order and ascending. I trust that by the time your species has reached the point where it will be able to blow us to powder, we shall be well out of the three-dimensional range of experience."

With the most natural gesture in the world he extended his hand. In turn Yancey and Will gripped it. He stepped through the hull with a farewell wave.

"Commons room—ready ship!"

"Yes, Officer!"

"One hundred eighty degrees!"

"Yes, Officer!"

"And full speed—cut!"

"Cut!"

Close together they contemplated the golden-skinned Madame Tung.

"Everything has its cost," said Will.

Yancey said nothing.

Unrelieved blackness alternated dazzling star-clusters; from rim to rim of the universe stretched the thin line that marked the hero's way.

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Not According To Newton

(continued from page 21)

ositions, which prove to be generally reliable—sometimes. You can set up tests for the Newtonian "second law of motion", eliminate interference factors and come out with a measurable equal-and-opposite-reaction to the action. You can't isolate a particular element in the human equation so easily; but the expert politician can take action where the interfering elements to the reaction he seeks will be negligible. (That is, he did the right thing at the right time in the right way.)

As I said above, the human reaction is seldom equal to the action, particularly when we deal with groups. It may be more greater, it may be lesser, but it is rarely even close to what we'd call equal. Statistically speaking, equality must occur now and then—but we have no way of knowing for sure when it does.

Early in the 16th Century, Nicolo Machiavelli made a study of history, the first study of its kind to be made in the Western World, so far as we know. What he did was to take careful note of what famous and infamous men and women, who had played leading roles in their times, were reported to have said about their aims, motives and actions; what they were reported actually to have done; and what was reported to have been the results. He was trying to (a) assess the ratio between human action and reaction (b) assess the ratio between what people said and what they did (c) assess to reaction what men said in relation to what they did, and determine which had the more lasting effect.

He wasn't making anything up out of his own head; he wasn't out to prove any theory. He was trying to set the basis for a science of political behavior, which a politician could use as a guide book.

ONE STILL hears Machiavelli maligned as one of the most evil men who ever lived, as and his *Discourses,* especially "The Prince", which grew out of them, as one of the most evil books ever written. This

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is partly because various rulers since the 16th Century have used "The Prince" as a guide-book on How To Be A Successful Despot Without Appearing To Be One (or just How To Be A Successful Despot period). But like all other published generalization about how human behavior actually tends to run, "The Prince" is neither a good nor an evil book. Scoundrels have found it useful; but honest politicians (those who put service to the best interests of their constituents above personal ambition) can also find it useful.

Machiavelli didn't discover any "laws of human behavior" in the scientific sense, but he did discover general tendencies, more often reliable than not. We.

[*Turn Page*]

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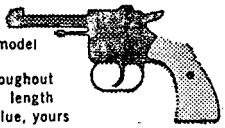

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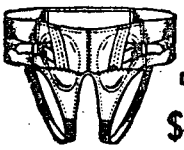

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speak of the "law" of gravitation because, so far as we have been able to discover, all objects within the "field" of the Earth are attracted to Earth's "center of gravity" in a uniform manner. No exceptions or variations. (To interfere with the attraction, which is what we do when we build a bridge, or a floor over the cellar, does not make an exception to, or variation in, the "law".) But generalizations about human behavior, however useful, are likely to be subject to exceptions and variations at any time—and we don't know all the exceptions or variations.

One Machiavellian generalization is that men will forgive grievous wrongs, but take a bloody revenge for petty slights. Now this is

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obviously not a 100% sound law of human behavior, because history provides examples where people have avenged grievous wrongs and forgiven petty slights. But just the same, the generalization is a sound one for a politician to remember. Now the author's intent was not to encourage the perpetration of grievous wrongs upon people, but to warn rulers against petty affronts. And history full of examples where great injuries were forgiven, while mayhem and murder arose from a trifle.

NOW HERE is an example of an unequal reaction. Moreover, in some instances, this outburst of violence following a trifling action may have represented an accumula-

[*Turn Page*]

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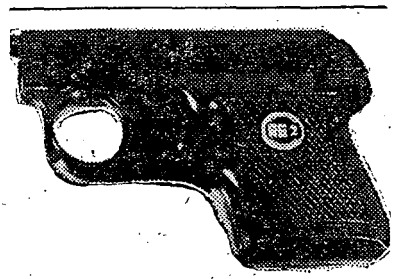

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tive reaction to many actions. Let's be thankful that this sort of thing doesn't happen too often in physics; I wouldn't want the door to fall in when I knocked gently on it, as a long-delayed and unequal reaction to the knocks it had been receiving for lo these many years.

Again, we have the matter of reaction not being opposite. The violent reaction to the petty affront might be an instance where war or revolution followed what someone said or declined to say. Here's reaction neither equal nor opposite; it's as if the door on which I knocked gently not only immediately fell down, but fell outward on me—instead of falling inward as it ought to.

In fiction, of course, we have to make events more or less Newtonian. In real life we often encounter a violent or startling reaction where the action itself is unknown to us. Sometimes we never learn what the action was; or we learn only much later that we won the jackpot of accumulated reaction. But in most instances, fiction cannot be so chaotic; there must be an ordering and

[*Turn TO Page* 126]

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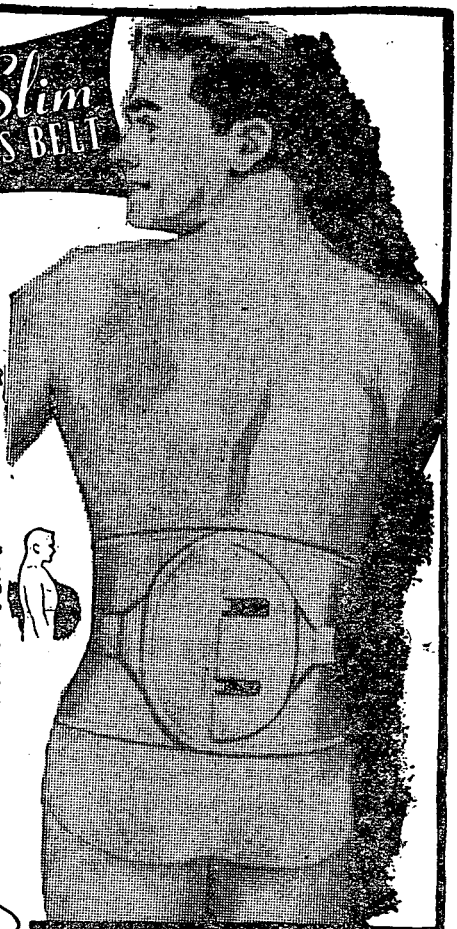

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shaping which the reader can discover, even though the characters may be unaware of it. We want the illusion that all is neatly worked out and contained within the frame of the story; that we know at the end, at least, why this or that happened, and have some indication of a conclusion.

An actual science of human behavior may be needed but we haven't obtained one yet — although every now and then you hear proclamations to the effect that someone, or some group, has worked it all out. The Freudians haven't done it; neither have the Marxists, Dianeticists, Scientologists; or the Reichians or General Semanticists, etc. Which doesn't mean, however, that any or

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all of them may not have added to the list of more-or-less reliable generalizations.

A new Machiavelli will be useful—but only if he is completely disinterested.

RAWL

DOWN TO EARTH

THANKS to those of you who have written in, suggesting stories for a "second look" in these pages. We'll do our best to oblige, as we can.

The reader who nominated "The Core" asked if there wasn't some sort of "fan gag" behind it, even though it was a perfectly serious story, with some humorous touches.

Yes, there was indeed. In the November 1933 issue of *Wonder Stories*

[*Turn Page*]

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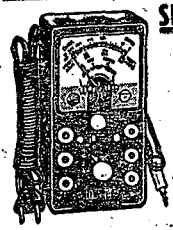

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appeared a story entitled "The End of Tyme" by A. Fedor and Henry Hasse. This was a decidedly "fannish" sort of story, about a fictitious editor of a (then) fictitious science fiction magazine—*Future Fiction*. In this tale, Tyme—a man from the future—calls upon editor B. Lue Pencill. In the August 1934 issue of *Wonder Stories*, there appeared a sequel to this tale, "The Return of Tyme". During the course of the story, we find that the April 1942 issue of *Future Fiction* ran the first installment of an epic masterpiece of science fiction—"The Core", by Professor John S. Mith, D.T. —

In 1934, I was a science fiction fan, just becoming active. But in 1941, I

[*Turn To Page* 130]

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was editor of *Future combined with Science Fiction.* Donald A. Wollheim reminded me of the prophecy in this old issue of *Wonder Stories,* so I decided to do what I could to make it work out. We couldn't run 4-part serial in a bi-monthly magazine, of course; and no science fiction author by the name (or pseudonym) of Professor John S. Mith, D.T. had appeared meanwhile; but nonetheless I thought that something could be done.

I'll now quote from "Station X", the readers' department in that issue—where, I see, I goofed and credited one "E. E. Myth", rather than "John S. Mith, D.T." with the story prophesied by Fedor and Hasse.

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RAWL

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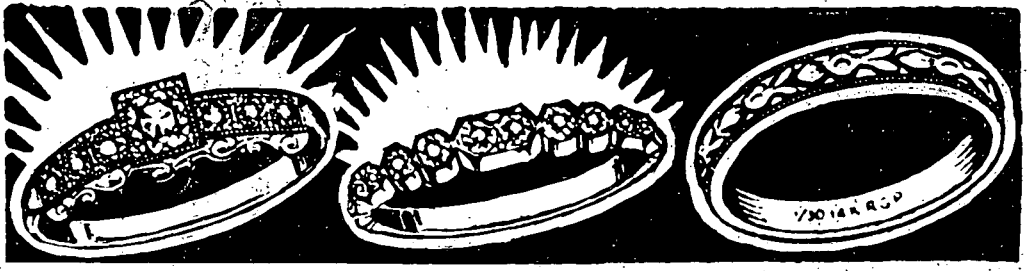

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